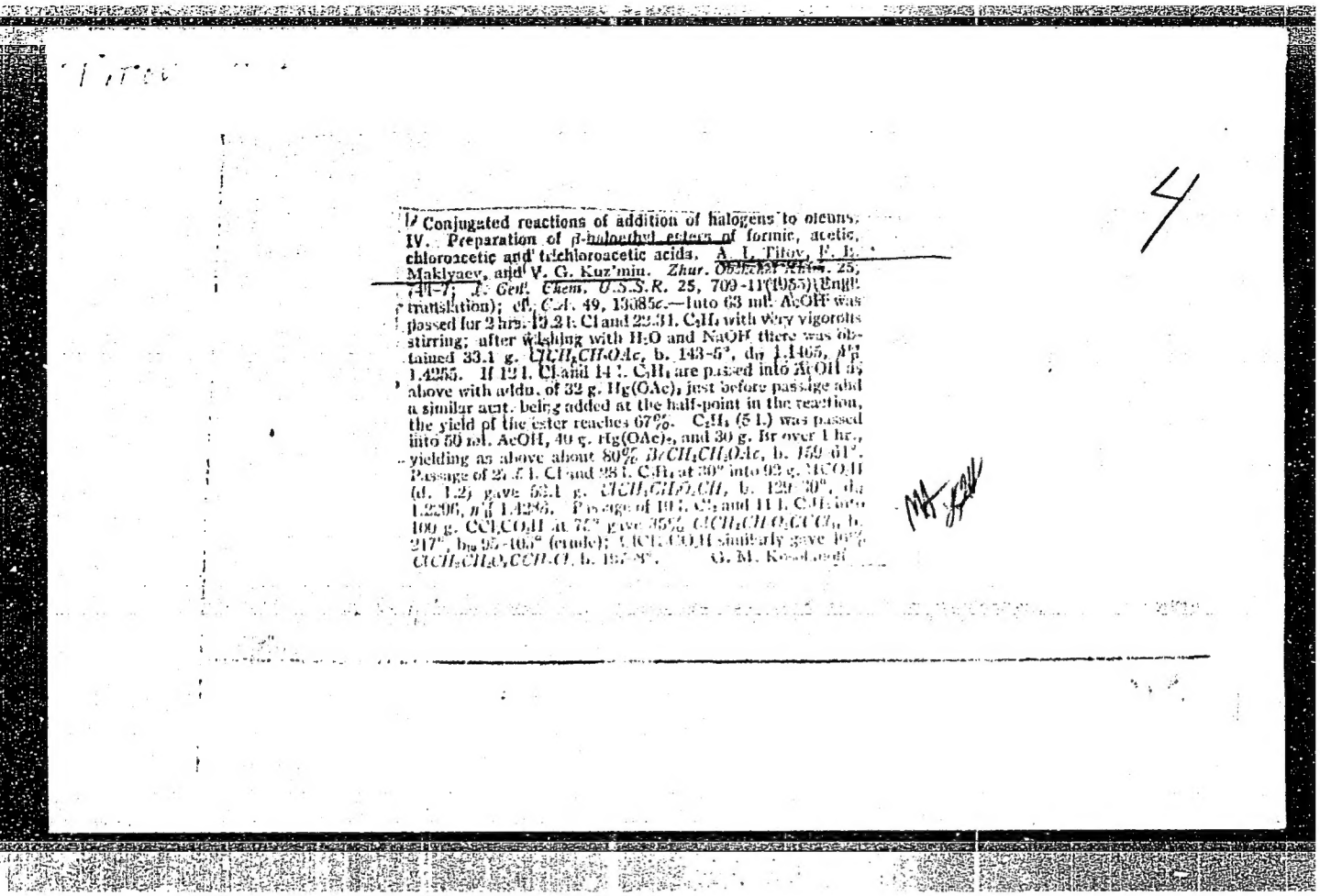
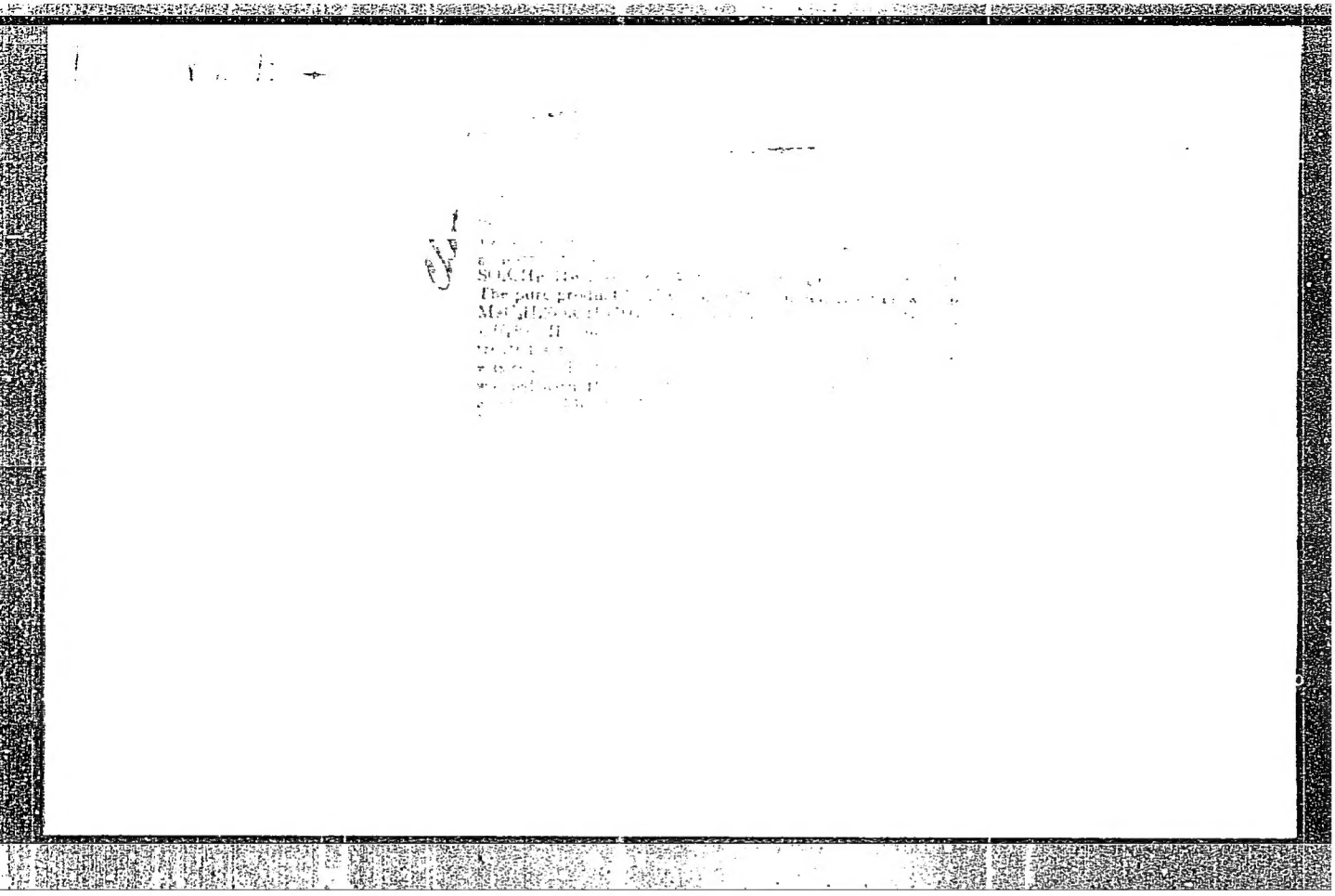


IV Conjugated reactions of addition of halogens to olefins. IV. Preparation of β-haloethyl esters of formic, acetic, chloroacetic and trichloroacetic acids. A. L. Tifov, F. L. Maklyaev, and V. G. Kuz'min. *Zhur. Obshchei Khim.* 25, 741-7; *J. Gen. Chem. U.S.S.R.* 25, 709-11(1955)(Engl. translation); cf. *C.A.* 49, 13085c.—Into 63 ml. AcOH was passed for 2 hrs. 13.2 l. Cl and 22.31. C_2H_4 with very vigorous stirring; after washing with H_2O and NaOH there was obtained 33.1 g. $ClCH_2CH_2OAc$, b. 143-5°, d_4^{20} 1.1465, n_D^{20} 1.4255. If 12 l. Cl and 14 l. C_2H_4 are passed into AcOH as above with addn. of 32 g. $Hg(OAc)_2$ just before passage and a similar amt. being added at the half-point in the reaction, the yield of the ester reaches 67%. C_2H_4 (5 l.) was passed into 50 ml. AcOH, 40 g. $Hg(OAc)_2$, and 30 g. Br over 1 hr., yielding as above about 80% $BrCH_2CH_2OAc$, b. 159-61°. Passage of 27.5 l. Cl and 28 l. C_2H_4 at 30° into 92 g. HCO$_2$H (d. 1.2) gave 53.1 g. $ClCH_2CH_2OCH$, b. 129-30°, d_4^{20} 1.2206, n_D^{20} 1.4256. Passage of 19 l. Cl_2 and 11 l. C_2H_4 into 100 g. CCl_3CO_2H at 72° gave 35% $ClCH_2CH_2OCOCCl_3$, b. 217°, b_{18} 95-105° (crude); $ClCH_2CO_2H$ similarly gave 10% $ClCH_2CH_2OCOCH_2Cl$, b. 157-8°. G. M. Kosolapoff



TITOV, A.I., professor.

Mikhail Ivanovich Konovalov, an outstanding scientist and teacher; on the 50th anniversary of his death. Khim. nauka i prom. 2 no.1:120-122 '57. (MLRA 10:4)
(Konovalov, Mikhail Ivanovich, 1858-1906)

AUTHOR TITOV A.I.,VEREMEYEV G.N., SMIRNOV V.V., SHAPILOV O.D.

TITLE A New Substitution Reaction of Alkohol Hydroxyl For Fluorine And Its Use. 20-2-32/67
(Novaya reaktsiya zameny spirtovogo gidroksila na fter i yaye primeneniye -Russian)

PERIODICAL Doklady Akademii Nauk SSSR,1957,Vol 113,Nr 2,pp 358-36o(U.S.S.R.)
Received 6/1957 Reviewed 7/1957

ABSTRACT The generally known reactions for obtaining haloid alkyls, especially the influence of fluorine hydrogen and fluorine phosphate compounds,turn out to be of little use for the immediate replacement of alcohol hydroxyls by fluorine. Appropriate methods must still be found. In 1942 one of the authors together with A.N. Baryshnikova had the possibility to carry out such a replacement in a single phase. It concerned the transformation of ethylene chlorohydrin into 1.2-fluorine-chlore-ethane when being boiled with a mixture of benzol-sulfofluoride and fluorine potassium. Also the reaction mechanism was demonstrated. The reaction passes the following phases: 1. An alcoholate develops, 2. acylation by a sulfofluoride under formation of alkyl sulfonate follows.The partial formation of sulfonates without the presence of fluorine potassium is also possible on the occasion of sulfofluoride acting on alcohols.3. In the last phase the alkylation of the fluorine potassium takes place, as already known. Secondary processes can take place at the same time in the course of which simple ethers and unsaturated compounds develop or their polymerization takes place respectively.

Card 1/2

A New Substitution Reaction of Alcohol Hydroxyl For Fluorine And Its Use. 20-2-32/57

This new method was applied to the production of fluorine alkyl and its substitutes. The production experiments according to the new method of 1.2-difluoroethane are of special interest. Despite dissenting opinions it turned out to be a completely steady matter with a boiling-point at 26° and with common properties of fluorine paraffin, especially with a resistance against hydrolysis. The difluoroethane was synthetically produced by the alkylation of fluorine potassium by ß-fluoro-ethyl-benzol-sulfonate. The initially mentioned reaction (I) led to a noticeable formation of 1.2-dichloroethane and obviously of 1.2-difluoroethane as well. The former matter develops by the alkylation of the ß-chloro-ethyl-benzol-sulfonate, developing inthe meantime, of the chloro-potassium which originates from the reaction of the same ether and the ethylene-chlorohydrin with fluorine potassium. The conclusions are also true in the case of the explanation of the dichloroethane formation on the occasion of alkylation of the fluorine potassium with ß-chloro-ehyl-benzol-sulfonate in the experiments of Razumovskiy. Finally some experiments together with their results and the properties of their products are described. (12 citations from publications).

ASSOCIATION
PRESENTED BY
SUBMITTED
AVAILABLE Library of Congress
Card 2/2

AUTHORS: Baryshnikova, A. N., Titov, A. I. 20-114-4-27/63

TITLE: The Nitration of Aromatic Compounds by Nitric Anhydride According to the Radical Mechanism (Nitrovaniye aromaticheskikh soyedineniy azotnym angidridom po radikal'nomu mekhanizmu)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 777-780 (USSR)

ABSTRACT: In 1941 the authors for the first time described the nitration of unsaturated and aromatic compounds according to a radical mechanism, taking nitrogen dioxide as a sample; from 1945 to 1953 the further developed this method in their works. In those they showed that the attaching of the monomeride of the nitrogen dioxide NO_2 by the π-linkage represents the deciding initial state of the reaction. This finally leads to the formation of a radical. The transformations of the radical obtained, lead to the formation of various products. In the case of benzol, e.g., one obtains nitrobenzol, p- and m-dinitrobenzene, s-trinitro benzene, nitrophenols, etc. Chlorobenzene yields, beside other products, many nitroderivatives of the meta-chloro phenol, etc. The prevailing

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formation of anomalous products - poly-compounds and nitrophenols - is characteristic of nitration by means of the radical mechanism. Ideas of the radical dissociation of nitrogen anhydride made it possible to find methods for the directing of its rapid reaction with paraffins, as well as to disclose a number of peculiarities of this type of nitration, especially the checking by the addition of nitrogen dioxide. The extremely high activity of nitrogen trioxide NO_3 towards NO and NO_2 in the reactions with paraffins, even at low temperatures, is to be explained by the fact that the non-coupled oxygen electron $O_2N\text{-}O^{\cdot}$. is highly electrophilic and unsaturated. One may say that the electrophilic properties of these oxides are proportional to the constants of the electrolytic dissociation of the three respective acids: $K_{HNO_3} > K_{HNO_2} > K_{HNO}$ just as unsaturation is proportional to their constants of equilibrium with NO_2. In spite of the fact that a high activity of nitrogen anhydride, as compared to the nitrogen dioxide in the nitration by the radical mechanism, was expected there results a small amount of products of the radical reaction due to an extremely rapid nitration of

aromatic compounds through N_2O_5 by means of ion mechanism. By carrying out the process at an elevated temperature and in a non-polar medium, a prevailingly radical nitration was brought about. This favored the dissociation of the N_2O_5 and suppressed the formation of the cation. The prevalence in the final product of the reaction of anomalous products (polynitro-derivatives and nitrophenols), in spite of the enormous excess of the aromatic initial compound, is characteristic of the interaction of the nitrogen anhydride by means of the radical type. Details of several tests are given and the formation of the above-mentioned products is explained.
There are 14 references, 12 of which are Soviet.

PRESENTED: January 23, 1957, by A. V. Topchiyev, Member, Academy of Sciences, USSR

SUBMITTED: July 31, 1956

Card 3/4

AUTHOR: Titov, A. I. (Moscow)

SOV/74-27-7-3/7

TITLE: The Nitration of Aromatic and Unsaturated Compounds (Nitrovaniye aromaticheskikh i nenasyshchennykh soyedineniy)

PERIODICAL: Uspekhi khimii, 1958, Vol. 27, Nr 7, pp. 845 - 890 (USSR)

ABSTRACT: In the beginning the author mentions that the conceptions concerning the mechanism of the nitration of aromatic compounds have hitherto been based on the postulate of the decisive role played by the transition complexes of donor-acceptor character (Refs 1,2). After further explanations of the nitration mechanism the author deals in the first section with the molecular and ionic structure of the sulfur-nitrogen mixtures and of other nitrating substances. In the second chapter he deals with the structure and the common reactions of various dioxide forms. The third chapter deals with the so-called normal nitration, as: the nitration by means of a sulfur-nitrogen mixture and other substances nitrating violently, and a normal nitration by means of nitric acid without the participation of nitrogen oxides. In the fourth section the author discusses the nitration by means of nitric anhydrides, in the fifth he discusses the cata-

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lytic nitration by means of nitric acid. The sixth section deals with the nitration of unsaturated compounds, the seventh with some problems concerning chemical orientation and activity. In the eighth section the author deals with intramolecular nitration. The ninth section deals with the problem of the differences in the nitration of aromatic and unsaturated hydrocarbons. Finally the author mentions that the discovery of the moving forces and mechanisms of these reactions belong to the characteristic features in the further development of the investigation of unsaturated, aromatic and saturated compounds. The investigations of nitration carried on through decades have been the prerequisite of mastering many applications of the chemical interaction of nitrating agents with organic substances. It must, however, be pointed out that the explanation of some problems concerning the theory of nitration has only just begun, and that some problems have not yet been solved. There are 1 table and 178 references, 50 of which are Soviet.

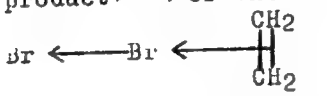
TITOV, A. I.,

AUTHORS: Titov, A. I., [illegible] 79-2-6./64

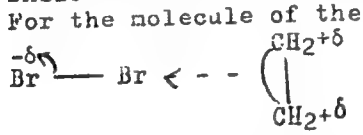
TITLE: In a Course of Discussion: a Reply to the "Remarks" of Ye. A. Shilov (V poryadke diskussii v otvet na "zamechaniya" Ye. A. Shilova).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 561-565 (USSR)

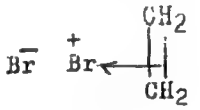
ABSTRACT: The work by Dewar (ref. 2) on the structure of the intermediate product of the olefin complex with the halogen molecule



published in 1946 is the basis of the "discussions" which have been led since 1955 between the authors of this article and that mentioned in the title. The above formula was given by Shilov as far as the adduct of the bromine cation was concerned. For the molecule of the halogen complex the structural formula



by Titov et al. was quoted.

Shilov then described the formula  as correct not noticing that under certain conditions it is identical with the first mentioned. In his third variant of "Remarks" (in ZOC) Shilov

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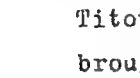
In a Course of Discussion: a Reply to the "Remarks" of Ye. A. Shilov. 77-2-6./64

said that the formula of the hypothetical cation applied by Titov et al. and the Roberts-Kimbal  formula cannot be brought in line. Knunyants, Kabachnik (ref.4) et al. however, also (like Titov et al.) identified the π-complex with the structure by Roberts-Kimbal, since in principle both formulae represent an adduct in which the bromine cation is chemically bound to both atoms of the ethylene carbon. The brokenarrow in the second formula (by Titov et al.) is to stress the weak donor-acceptor binding between Br_2 and C_2H_4 in the complex as O.A.Reutov (ref. 7) did also in his explanation of the Shilov's results.According to A. N. Nesmeyanov (ref. 11) the reactions to be investigated can be regarded as coupled affiliation reactions of the haloids to the olefins. In the formal conception of Ye. A. Shilov of this reaction the electrophilic character of the complex as well as the reaction principle are not present. Furthermore some assertions made by Shilov are disproved of and the following conclusions are made: the first "Remark" by Shilov was based on an error which lead him to further unfounded statements. The important results of the investigations which considerably contributed to the theory of the coupled affiliation in the field of the complex halogen mo-

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In a Course of Discussion: a Reply to the "Remarks" of Ye. A. Shilov. 79-2-C/6

leculen and olefins were ignored by Ye. A. Shilov and the results were described as preparative. There are 12 references, 9 of which are Slavic.

SUBMITTED: September 2, 1957

AVAILABLE: Library of Congress

Card 3/3

TITOV, A.I.; LAPTEV, V.G.

Achievements and problems of the investigation of the oxidizing nitration of aromatic compounds. Org. poluprod. i kras. no.1:5-39 '59. (MIRA 14:11)

(Aromatic compounds)
(Nitration)

5.3700(C)

~~5(3)~~

SOV/20-130-2-27/59

AUTHORS: Titov, A. I., Lisitsyna, Ye. S., Shemtova, M. R.

TITLE: Some Observations Concerning the Chemistry of Ferrocene

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 2, pp 341 - 343 (USSR)

ABSTRACT: The authors succeeded in producing ferrocene in a yield amounting to 90% of the theoretical one (Ref 1) (see Experiment Nr 1). The cobalt-containing analog was produced in a very simple way as $(C_5H_5)_2Co^+Br_3^-$ (Experiment Nr 2) while the ferrocene was transformed almost quantitatively into the ferricinium salt $(C_5H_5)_2Fe^+FeCl_4^-$ (Experiment Nr 3).

The synthesis of 1,1'-dinitroferrocene by the reaction of $FeCl_2$ with sodiumnitrocyclopentadienate was not possible.

As is known, ferrocene could not be nitrated (Refs 2,3), it was only transformed into ferrocinium cation. The authors observed that this process with diluted nitric acid is practically based on autocatalytic reaction with nitrogen dioxide (see Scheme). In the presence of hydrazine, the oxidation nearly stops. An addition of urea acts weakly. Con-

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sidering outer characteristics and the formation of iron cations the action of HNO_3 on the ferricinium cation leads to transformation products of nitrocyclopentadiene. In the reaction of ferrocene with reagents introducing the nitroso group such as nitrosyltetrafluoroborate $NO^+BF_4^-$, a radical-like nitrogen oxide is separated out. The interaction of ferrocene with the NO_2^+ of various nitration agents in the first stage must proceed in a similar way. Ferricinium cation also developed under the action of aluminum chloride solutions in thionyl chloride, in phosphorus trichloride, and in phosphorus oxychloride on ferrocene, probably due to the reaction with cations of the type $SOCl^+$, PCl_2^+. Considerable amounts of sodiumnitrocyclopentadienate and (after treatment with water) iron hydroxides were formed by a 2-day action of ethyl nitrate in the presence of sodium ethylate or sodium tertiary butylate, solved in the corresponding alcohol. Without alcoholate, no reaction with ethyl nitrate occurred, even in acetic-acid anhydride. It is possible that the activat-

ing action of the alcoholate is based on its complex formation with ferrocene due to the interaction with a cationoid Fe-atom (see Scheme), and on an increase in nucleophilic capacity of the C_5H_5-radicals. Thus, these radicals are adapted even more to the state of the $C_5H_5^-$-anion. As is known, a free cyclopentadienate ion reacts quickly under such circumstances to form a nitro derivative (Ref 4). The authors produced disulfonic acid in a yield up to 80% of the theoretical one by sulfonation of ferrocene in acetic-acid anhydride at 0° for 2,5 h. Iron cations were, however, formed at the same time. The method of producing ferrocenaldehyde worked out by the authors in 1957-58 proved to be more convenient than the methods described previously (Refs 8-11). Contrary to the assertions of reference 11, ethereal solutions of ferrocenaldehyde yield a bisulfite compound. This was utilized in the authors' method. Ferricinium cation developed in the reaction, and the ring was decomposed. The aldehyde was used to prepare several dyestuffs. Finally, the authors describe their experiments Nrs 1-5. There are 11

Some Observations Concerning the Chemistry of Ferrocene SOV/20-130-2-27/69

references, 3 of which are Soviet.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley im. K. Ye. Voroshilova (State Scientific Research Institute of Organic Intermediates and Dyestuffs imeni K. Ye. Voroshilov)

PRESENTED: September 11, 1959, by A. N. Nesmeyanov, Academician

SUBMITTED: September 5, 1959

Card 4/4

TITOV, A.I.

Problems of reactivity and orientation in the theory of nitration of the aromatic compounds of the complexion type. Org. poluprod. i kras. no.2:46-76 '61. (MIRA 14:11)
(Aromatic compounds) (Nitration)

L 00663-67 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/GG

AUTHOR: Abroyan, I. A.; Titov, A. I.

ORG: Leningrad Polytechnic Institute im. M.I.Kalinin (Leningradskiy politekhnicheskiy institut)

TITLE: Changes in radiation conductivity under ion bombardment /Report, Twelfth All-Union Conference on the Physical Bases of Cathode Electronics held in Leningrad 22-26 October 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 865-867

TOPIC TAGS: germanium, single crystal, ion bombardment, lattice defect, electric conductivity, radiation effect

ABSTRACT: The effect of bombardment with 3 keV K^+ ions on the coefficient of radiation-induced conductivity (ratio of the induced conductivity to the inducing radiation flux) of a 35 Ohm cm germanium crystal has been investigated by a technique that is described elsewhere by the authors (Fiz. tverdogo tela, 7, 2007 (1965)). The surface of the target was perpendicular to the [111] axis and the bombarding ions were incident in the [100] direction. A dose of 10^{14} ions/cm^2 was found to reduce the radiation-induced conductivity coefficient by an order of magnitude. The radiation-induced conductivity coefficient, as a function of the incidence angle of the inducing radiation, showed a pronounced maximum at an incidence angle of 35°, corresponding to incidence in the

Card 1/2

L 00663-67
ACC NR: AP6015786

[110] direction. Although increasing the dose of 3 keV K^+ ions from zero to 3×10^{14} ions/cm^2 greatly reduced the radiation conductivity coefficient, it did not affect the position and relative height of this maximum. The number of pairs of Frenkel defects due to the ion bombardment was estimated by dividing the energy dose by half the threshold energy for producing a pair of defects. For the 3×10^{14} ions/cm^2 does this calculation gave a defect density of 1.8×10^{16} cm^{-2}, corresponding to about 20 interstitial germanium atoms in each channel in the [110] direction. The authors argue that so high a density of defects should alter the dependence of the radiation conductivity coefficient on the incidence angle, and conclude that the defect density was not actually so high as calculated. Two possible reasons for the discrepancy are suggested: either there may have been a partial anneal of interstitial atom - vacancy pairs, or a particle moving in the [100] direction in a germanium crystal may expend considerably more than half its energy in collisions in which the energy transfer is below the threshold for defect production. Orig. art. has: 1 formula and 2 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 004/ OTH REF: 002

Card 2/2 vlr

TITOV, A.I.

Nitration of the paraffin chain of ethylbenzene and of tetralin.
Zhur. ob. khim. 33 no.5:1497-1502 My '63. (MIRA 16:6)

(Benzene) (Naphthalene) (Nitration)

TITOV, A.I.

Ionic mechanism of the nitration of unsaturated compounds. Nitrofluorination of olefins and their halogen-substituted derivatives. Dokl. AN SSSR 149 no.2:330-333 Mr '63. (MIRA 16:3)

1. Predstavleno akademikom M.M.Shemyakinym.
(Olefins) (Nitration)

TITOV, A.I.

Nitrosochlorination of olefins and their derivatives by an ionic mechanism. Anomalous addition to chloroethylenes. Dokl.AN SSSR 149 no.3:619-622 Mr '63. (MIRA 16:4)

1. Predstavleno akademikom M.M.Shemyakinym.
(Olefins) (Nitrosation)

TITOV, A. M.

21410 TITOV, A. M. Ob opredelenii "Koeffitsienta raskhoda na izluchenie" dlya izluchayushchey prozrachnoy (zastekl'ennoy) poverkhnosti. Trudy krasnodarsk. IN-TA pishch. Prom-sti, Vyp. 5, 1949, c. 3-6.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

TITOV, A. N.

21409 TITOV, A. N. Ob opredelenii i svoystvakh sero-o i absolyutno matovogo tel. Trudy krasnodarsk. IN-TA Pishch. Prom-sti, Vyp. 5, 1949, c. 7-11. Bibliogr: 10 Nazv.

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

TITOV, A. M.

USSR/Physics - X-Ray Tube Anode Heating 11 Sep 51

"Heat Regim of the Anode of Powerful Impulse Tubes," T. A. Sanina, A. A. Sanin, A. M. Titov

"Dok Ak Nauk SSSR" Vol LXXX, No 2, pp 209-211

Problem concerning the heat balance of the anode for the stationary case was studied by many, especially by V. Rakov and A. Bliznyuk (cf. "Zhur Tekh Fiz" 10, 11 1940). Similar problem for the nonstationary case was solved by G. A. Grinberg, N. N. Lebedev, E. D. Pergamentseva, I. P. Skal'skaya and Ya. S. Uflyand (cf. "Zhur Tekh Fiz" 20, 12, 1950), for rather large intervals (1 sec) of exposure. Authors study the case for very small exposure times (10^{-6} to 10^{-7} sec) and 100-1,000 amp. Set up the eqs of heat conduction in wolfram target and analyze temp behavior. Submitted by Acad D. V. Skobel'tsyn 17 Jul 51.

PA 221T88

SANINA, T.A.; SANIN, A.A.; TITOV, A.M.

On the problem of the temperature of an object in corpuscular radiation flow. Zh. eksper. teor. Fiz. 23, No.6, 703-8 '52. (MLRA 6:1)
(PA 57 no.673:400 '54)

TITOV A. M.

K-5

Category : USSR/Optics - Physical Optics

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4901

Author : Titov, A.M., Kupyanskaya, V.V.
Title : Generalization of the Stokes Equation to Include the Case of Passage of Light through an Absorbing Plane-Parallel Layer of Liquid

Orig Pub : Tr. Krasnodarsk. in-ta pishch. prom-sti, 1955, vyp. 12, 19-24

Abstract : The authors compute the reflection coefficient P and the transmission coefficient T of an absorbing plane-parallel plate for two cases: 1) the spaces above and below the plate are infinite and are filled with non-absorbing substances which are generally speaking different; 2) the plate is located between non-absorbing plates of finite thickness. In the former case $P = \rho + \frac{\rho'(-\rho)^2 e^{-2kx}}{1-\rho\rho' e^{-2kx}}$, $T = \frac{(1-\rho)(1-\rho')e^{-kx}}{1-\rho\rho' e^{-2kx}}$ where ρ and ρ' are the reflection coefficients from the first and second planes of the plate respectively, k the absorption coefficient of the plate, and $x = d/\cos i'$ is the thickness of the plate d divided by the cosine of the refraction angle. The equations for the second case

Card : 1/2

Category : USSR/Optics - Physical Optics

K-5

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4901

can be derived from those given above, by replacing the coefficient of reflection (ρ and ρ') and transmission ($1-\rho$ and $1-\rho'$) of the boundaries of the plate by coefficients of reflection (P_1, P_2) and transmission (T_1, T_2) of the plates surrounding the investigated absorbing plate. The authors emphasize that the equations obtained can give a substantial refinement in many spectrophotometric measurements.

Remarks by the abstractor. In equation (23) of the article there is a misprint: the numerator should contain $e^{-\alpha x}$ instead of $e^{-2\alpha x}$ as shown in the text.

Card : 2/2

Subject : USSR/Electricity AID P - 4142

Card 1/1 Pub. 27 - 29/33

Authors : Titov, A. M., Distinguished Worker in Science, Doc. Phis.-Math. Sci. Prof., and G. T. Tuman'yan, Kand. Tech. Sci., Krasnodar.

Title : On the formulation of laws of electromagnetic induction. (Letters and notes).

Periodical : Elektrichestvo, 12, 78, D 1955

Abstract : The authors refer to the note by B. N. Rzhonsnitskiy ("Law, principle or rule", this journal, No. 12, 1954), and propose their own formulation of electromagnetic induction in the form of two laws: 1) Law of Lentz, 2) Law of Faraday-Maxwell. One Soviet reference (1954).

Institution : None

Submitted : No date

TITOV, A.M.

Diffusive reflection of radiation by the surface of bodies, its general properties and characteristics. Trudy UzGU no.59:33-53 '55. (MIRA 10:12)

(Radiation) (Reflection (Optics))

KABANOV, Ivan Andreyevich; RABINOVICH, Sergey Yul'yevich; SAKHNOVSKIY, Mikhail Mikhaylovich; TITOV, Aleksandr Mikhaylovich; SURYGINA, E., tekhn.red.

[New processes for the manufacture and assembly of sheet-metal elements of blast furnaces] Novaia tekhnologiia izgotovleniia i montazha listovykh konstruktsii domennoi pechi; iz opyta organizatsii "Ukrglavstal'konstruktsii" Ministerstva stroitel'stva USSR. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1960. 39 p. (MIRA 14:1)

(Blast furnaces--Design and construction)
(Sheet-metal work)

KIM, Leonid Vasil'yevich; TITOV, A.M., red.

[Methods for the prescribed assembling of large-panel apartment houses] Metody prinuditel'nogo montazha krupnopanel'nykh zhilykh zdanii. Leningrad, Stroiizdat, 1965. 154 p. (MIRA 18:4)

POYDA, A.A.; KOKOSHINSKIY, I.G.; TITOV, A.N., retsenzent; MOISEYEV, G.A., retsenzent; KHARLAMOV, P.G., retsenzent; KESAREV, A.P., retsenzent; RUKAVISHNIKOV, Yu.A., retsenzent; MEDVEDEV, G.G., retsenzent; PALKIN, A.P., retsenzent; BOL'SHAKOV, A.S., retsenzent; KHITROVA, N.A., tekhn.red.

[Mechanical equipment of diesel locomotives] Mekhanicheskoe oborudovanie teplovozov. Moskva, Transzheldorizdat, 1963. 463 p. (MIRA 17:2)

AUTHOR: Titov, A. P., Livshits, I. A. SOV/79-29-5-12/75

TITLE: Influence Exercised by the Structure of Olefins Upon Their Activity in the Reaction of Chain Transfer in the Polymerization Process (Vliyaniye stroyeniya olefinov na ikh aktivnost' v reaktsii peredachi tsepi v protsesse polimerizatsii)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1605-1611 (USSR)

ABSTRACT: Styrene was dissolved in 16 olefins of different structure and then polymerized. The constant K of the chain transfer was determined according to the formula of F. R. Mayo (Ref 3) for each olefin. Further, that part of K was calculated which falls to the share of an active hydrogen atom, bound to a primary, secondary or tertiary carbon atom. The quantities of K are given in tables 1 and 2. The following regularity was observed: The activity of olefins depends on their structure. The mobility of the hydrogen atom is the least in primary, higher in secondary, and the highest in tertiary carbon atoms which are in α-position with respect to the double bond. With increasing number of substituents on the carbon atoms of the double bond the activity both of the entire olefin molecule

Card 1/3

and of the individual hydrogen atoms bound to the α-carbon atom increases. If the substituents are placed on both sides of the double bond, the activity of the olefin is somewhat higher than with unilateral substitution only. The olefins react more actively than the corresponding saturated hydrocarbons. A comparison with previous experiments on butadiene-sodium (Refs 1,2) shows that the change of activity varies in the various types of polymerization. The authors investigated the polymerization of styrene with 2-methyl-propene-1, 2-methyl-butene-1, 2-methyl-butene-2, 2-methyl-pentene-2, butene-2, pentene-2, pentene-1, 3-methyl-butene-1, hexene-1, 4-methyl-pentene-2, and 2,3-dimethyl-butene-2. In the experimental part the physical data of the initial substances (Table 3), the device (Fig 1), and the method of polymerization are described. Diagrams represent: figure 2 - the kinetics of the polymerization of styrene in dependence of the reaction time, figures 3, 4 and 5 - diagrams on the determination of the transfer constants of alkenes of various constitutions. Table 4 gives the physical data of the

Influence Exercised by the Structure of Olefins Upon Their Activity in the Reaction of Chain Transfer in the Polymerization Process SOV/79-29-5-12/75

polymerization reaction with iso-olefins, table 5 the same for n-olefins. There are 5 figures, 5 tables, and 17 references, 6 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva (All-Union Scientific Research Institute for Synthetic Rubber imeni S. V. Lebedev)(KL, 4-61, 187)

SUBMITTED: May 1, 1958

Card 3/3

ACCESSION NR: AP4045694 S/0138/64/000/009/0001/0004

AUTHOR: Filinov, G.P., Nikitina, L.A., Titov, A.P.

TITLE: Preparation of butadiene-styrene rubbers compounded with carbon black

SOURCE: Kauchuk i rezina, no. 9, 1964, 1-4

TOPIC TAGS: synthetic rubber, butadiene styrene rubber, carbon black, filler, latex viscosity, rosin soap, Leykanol, Nekal', Daksad', Vulkan 3, KhAF carbon black

ABSTRACT: The effect of stabilizers such as rosin soaps, Lykanol, Daksad 11 and Nekal', as well as of temperature, the alkalinity of the medium and the concentration of carbon black, on the viscosity and stability of carbon black dispersions was investigated, using KhAF type carbon black (Vulkan

effect of rosin soaps is practically

Card 1/3

L 15305-65
ACCESSION NR: [illegible]

decrease in the amount of stabilizer in the dispersion (less than 5.0-6.0 parts by wt. for 100 parts by wt. of carbon black) causes its viscosity to increase considerably, [illegible] show that a decrease below the critical [illegible] considerable increase in the [illegible] of the system [illegible] decreases the viscosity [illegible] potash soaps and containing 30% by weight of [illegible] viscosity and have sufficient kinetic [illegible] exert within [illegible] 5.0-6.0 parts by wt. of rosin potash soaps and [illegible] parts by wt. of alkali per 100 parts by wt. of carbon [illegible]

Card 2/5

ACCESSION NR: ...

ASSOCIATION: Voronezhskiy filial [illegible] nauchno-issledovatel'skogo instituta [illegible]

SUBMITTED: 00 ENCL: SUB CODE: OC, MT

NO REF SOV: ...

Card 3/5

ACCESSION NR: AP4045694

ENCLOSURE: 01

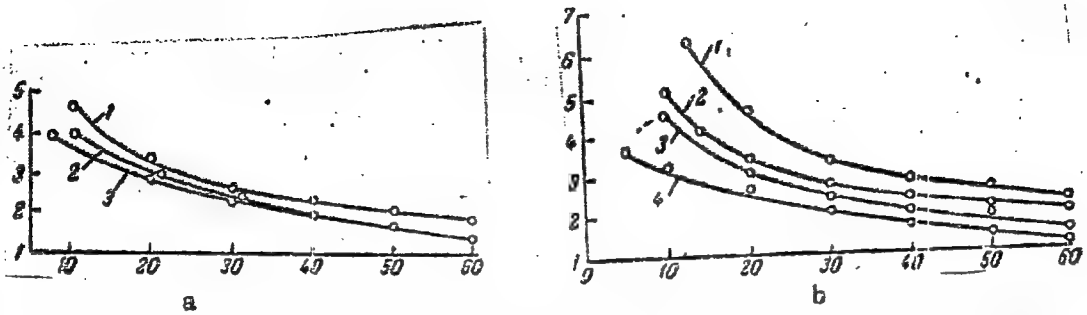
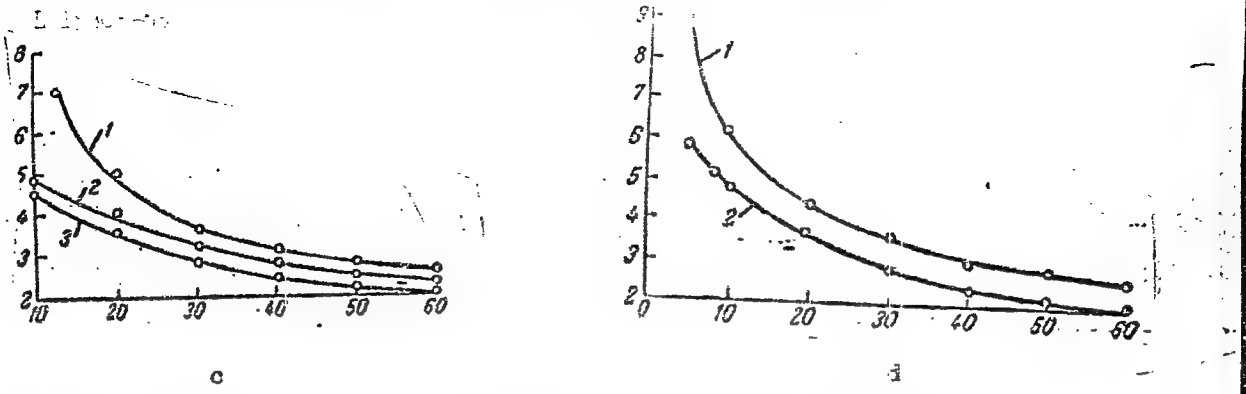


Fig. 1. Relationship between the viscosity of a dispersion containing 18 wt.% carbon black, temperature, and the type and amount of stabilizer: a - stabilized with the potassium soap of soft rosin (alkali content 0.4 parts by wt.): 1 - 4.0 parts by wt.; 2 - 5.0 parts by wt.; 3 - 6.0 parts by wt. b - stabilized with Daxad 11: 1, 2, and 3 as under a).

Card 4/5



c d

Fig. 1. c - stabilized with Leykanol (alkali content 0.4 parts by wt.): 1 - 3.0, 2 - 4.0, 3 - 5.0, 4 - 6.0 parts by wt. d - stabilized with Nekal (alkali content 0.4 parts by wt.): 1 - 8.0 parts by wt.; 2 - 10.0 parts by wt. Ordinate and abscissa in each of the four graphs are Viscosity in centipoise, and Temperature in °C, respectively.

Card 5/5

ACCESSION NR: AP[illegible]

ENCLOSURE: 0

L 54625-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5017442 UR/0138/64/000/010/0020/0024

AUTHOR: Titov, A. P.; Filinov, G. P.; Kotov, V. V.

TITLE: Coagulation of butadiene-styrene latexes containing carboxylic acid soaps

SOURCE: Kauchuk i rezina, no. 10, 1964, 20-24

TOPIC TAGS: rubber, butadiene, polystyrene, carboxylic acid, soap

ABSTRACT: The influence of pH, nature of the anion and cation of the soap, oil-filler and method of its introduction, as well as the plasticity of the polymer on the process of coagulation of butadiene-styrene latexes and the composition of the rubber was studied. The polymerization temperature was 50C, degree of polymerization 60%; the process was stopped with sodium dimethyldithiocarbamate (0.5 parts by weight); the latex obtained was set with a suspension of neosone D (two parts by weight). The nature of the anion and cation of the soaps and pH of the medium exerted a great influence

Card 1/3

L 54625-65

ACCESSION NR: AP5017442

on the process of coagulation, content of bound and free organic acids in the rubber, as well as the loss of the emulsifier. The content of bound acids in the rubber varied in the series: fatty acid soap, mixture of soaps of rosin and fatty acids, rosin soap, increasing in this sequence in acid medium and decreasing in alkaline medium. When sodium soaps of fatty acids and their mixtures with the sodium soap of rosin were used, the content of bound acids in the rubber was lower than when potassium soaps were used. Losses of the soaps increased upon passage from the rosin soap to the mixture of soaps of colophony and fatty acids, and further to fatty acid soaps. For sodium soaps of fatty acids and their mixtures with the sodium soap of rosin, the losses were greater than for potassium soaps. In all cases the amount of residual soap in the rubber and losses of the emulsifier were considerably lower in coagulation in acid medium than in coagulation in alkaline medium. Orig. art. has: 4 graphs, 2 tables.

Card 2/3

L 54625-65
ACCESSION NR: AP5017442

ASSOCIATION: Voronezhskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta sinteticheskogo kauchuka im. S. V. Lebedeva (Voronezh Affiliate of the All-Union Scientific Research Institute of Synthetic Rubber)

SUBMITTED: 00	ENCL: 00	SUB CODE: MT, GC
NR REF SOV: 002	OTHER: 002	JPRS

Card 3/3

L 41215-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AR6015911 (A) SOURCE CODE: UR/0081/65/000/022/S027/S027

28 B

AUTHOR: Titov, A. P.; Kotov, V. V.; Golod, A. Ye.; Travnikova, N. I.

TITLE: Effect of the nature of the emulsifier on the structure of the polymer

SOURCE: Ref. zh. Khimiya, Abs. 22S159

REF SOURCE: Tr. Labor. khimii vysokomolekul. soyedineniy. Voronezhsk. un-t, vyp. 3, 1964, 112-115

TOPIC TAGS: emulsion polymerization, isoprene

ABSTRACT: A study was made of the effect of the nature of the emulsifier on the ratio of 1,4-cis-, 1,4-trans-, 1,2-, and 3,4-linkages in isoprene polymers prepared by emulsion polymerization by a standard method at 5° and a pH of the aqueous phase from 2 to 10 in the presence of K soap of SKZh, Nekal, OP-10, or esteramine sulfate. The conversion reached 7-29% in the various experiments. It is shown that the content of linkages of different configurations in the polymer is practically independent of the conversion, changes only slightly with the pH of the aqueous phase, and very appreciably from one emulsifier to another. A difference in the mechanisms of polymerization was observed when ionogenic and nonionogenic emulsifiers were employed. V. Kopylov. [Translation of abstract]

SUB CODE: 07,11

Card 1/1 MLP

ACC NR: AP7010725 SOURCE CODE:UR/0138/66/000/010/0002/0004

AUTHOR: Filinov, G. P.; Titov, A. P.; Sukhomlinov, V. B.; Tsaylingol'd, V. L.; Oladov, B. N.; Shikhalova, K. P.

ORG: Voronezh Branch, All-Union Scientific Research Institute of Synthetic Rubber im. S. V. Lebedev (Voronezhskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta sinteticheskogo kauchuka); Scientific Research Institute of Monomers for Synthetic Rubber (Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka)

TITLE: Cold-resistant butadiene-methylstyrene rubber with low ash content

SOURCE: Kauchuk i rezina, no. 10, 1966, 2-4

TOPIC TAGS: butadiene styrene resin, potassium compound, fluid viscosity / SKMS-10RPD rubber

SUB CODE: 11

ABSTRACT: The effect of additives of potassium caseinate and bone cement on the viscosity and coagulation of latex and also on the ash content and properties of the rubber SKMS-10RP was investigated. Laboratory results were checked in a pilot plant. The latex was obtained according to a formulation adopted for high-temperature copolymerization of butadiene with alpha-methylstyrene. Latex was

Card 1/2 UDC: 678.762.2-134.622:536.485

0230 2242

ACC NR: AP7010725

coagulated without using sodium chloride.

It was found that addition of potassium caseinate markedly raises the latex viscosity. Bone cement, in contrast, only slightly raised the latex viscosity. Raising the temperature from 10 to 50° C reduces the viscosity of latex containing the additives by 50-100%. Results of chemical analysis show that separation of the rubber SKMS-10RPD with low ash content without use of sodium chloride solutions reduces its total ash content by 300-400% and its content of water-soluble ash by approximately 1900%. The avoidance of sodium chloride gives purer rubber and higher dielectric properties. Orig. art. has: 5 figures and 2 tables. [JPRS: 40,351]

Card 2/2

RYBNIKOV, G.S.; TITOV, A.S.

Reducing the discharge of harmful gases into the atmosphere during the concentration of sulfuric acid. Khim.prom. no.8:572-573 Ag '61. (MIRA 14:8)
(Decontamination (From gases, chemicals, etc.))

TITOV, A.S., arkhitektor

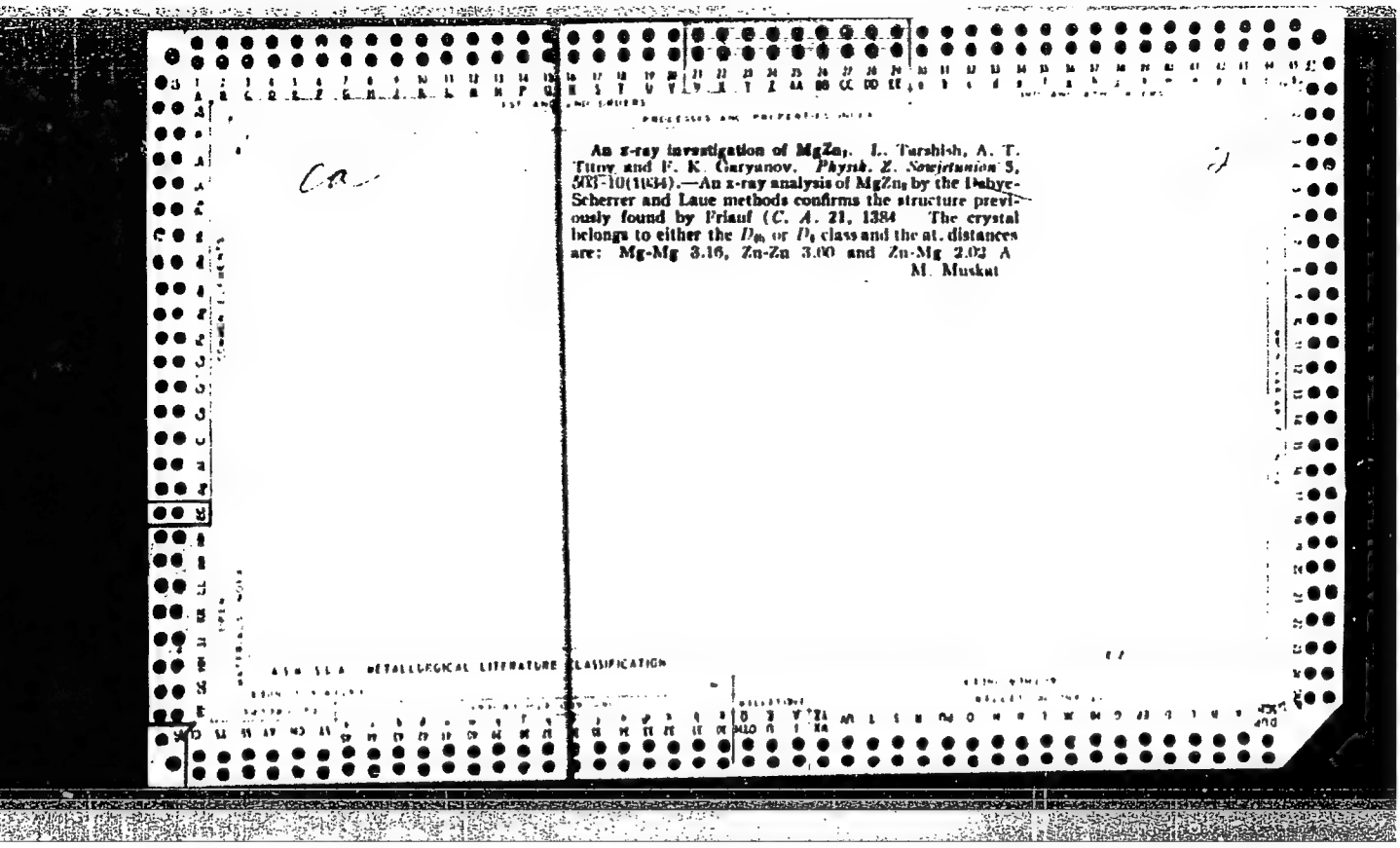
Using helicopters in hoisting and transporting operations in construction. Biul.tekh.inform.po stroi. 5 no.9:13-14 S '59. (MIRA 12:12)
(Pushkin--Building--Repair and reconstruction)
(Helicopters)

TSYGANOV, M.A., inzh.; TITOV, A.S., inzh.; SHASHKOV, A.N., kand.tekhn.nauk

Consultations on readers' questions. Svar. proizv. no.8:48 Ag '62. (MIRA 15:11)

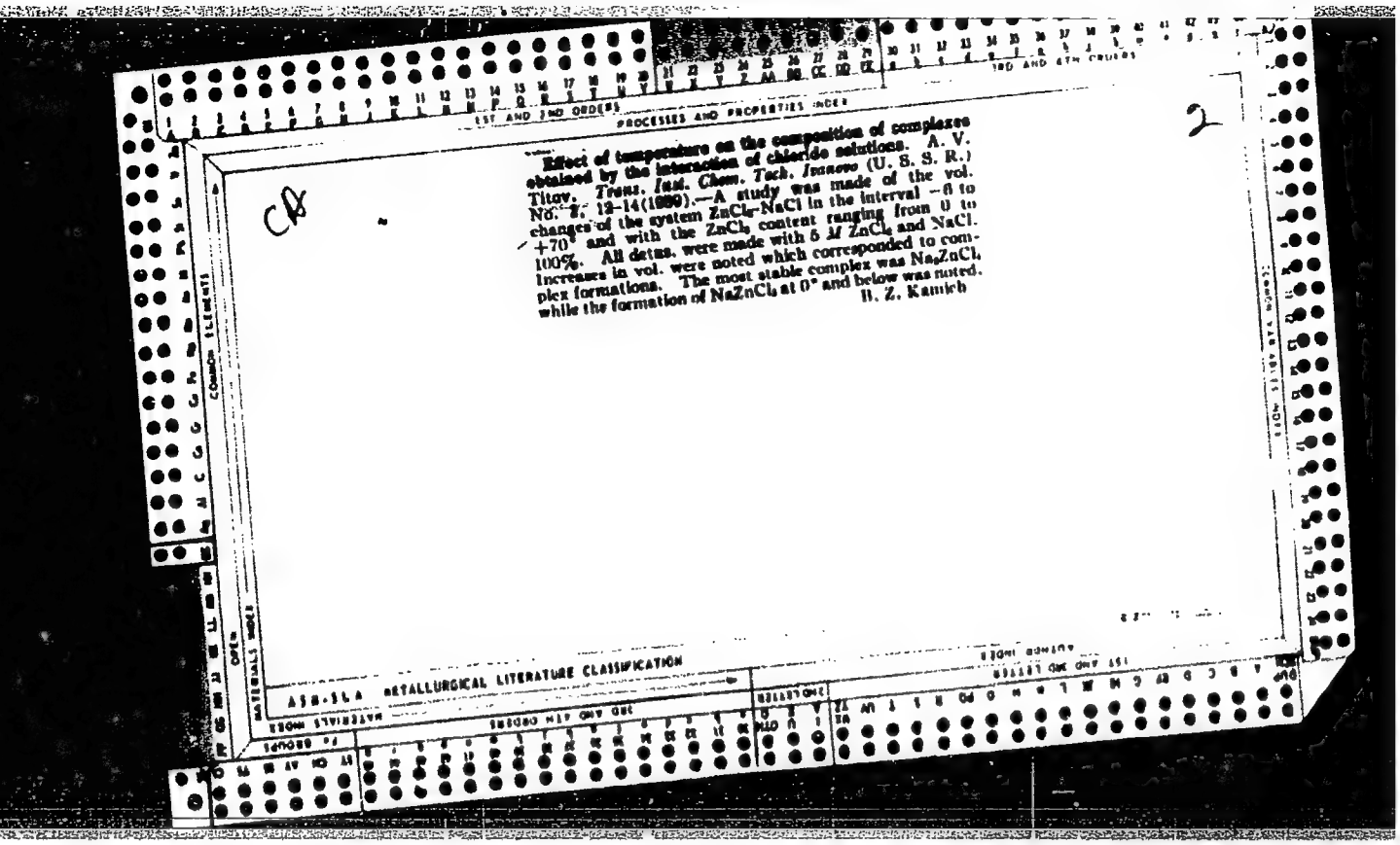
1. Otdel okhrany truda TSentral'nogo komiteta professional'nogo soyuza rabochikh mashinostroyeniya (for TSyganov). 2. Glavnoye upravleniye srednikh spetsial'nykh uchebnykh zavedeniy (for Titov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut avtogennoy obrabotki metallov (for Shashkov).

(Welding)



An x-ray investigation of $MgZn_2$. L. Tarshish, A. T. Titov and F. K. Garyanov. *Physik. Z. Sowjetunion* 5, 503-10(1934).—An x-ray analysis of $MgZn_2$ by the Debye-Scherrer and Laue methods confirms the structure previously found by Friauf (*C. A.* 21, 1384. The crystal belongs to either the D_{6h} or D_6 class and the at. distances are: Mg-Mg 3.16, Zn-Zn 3.00 and Zn-Mg 2.02 A.

M. Muskat



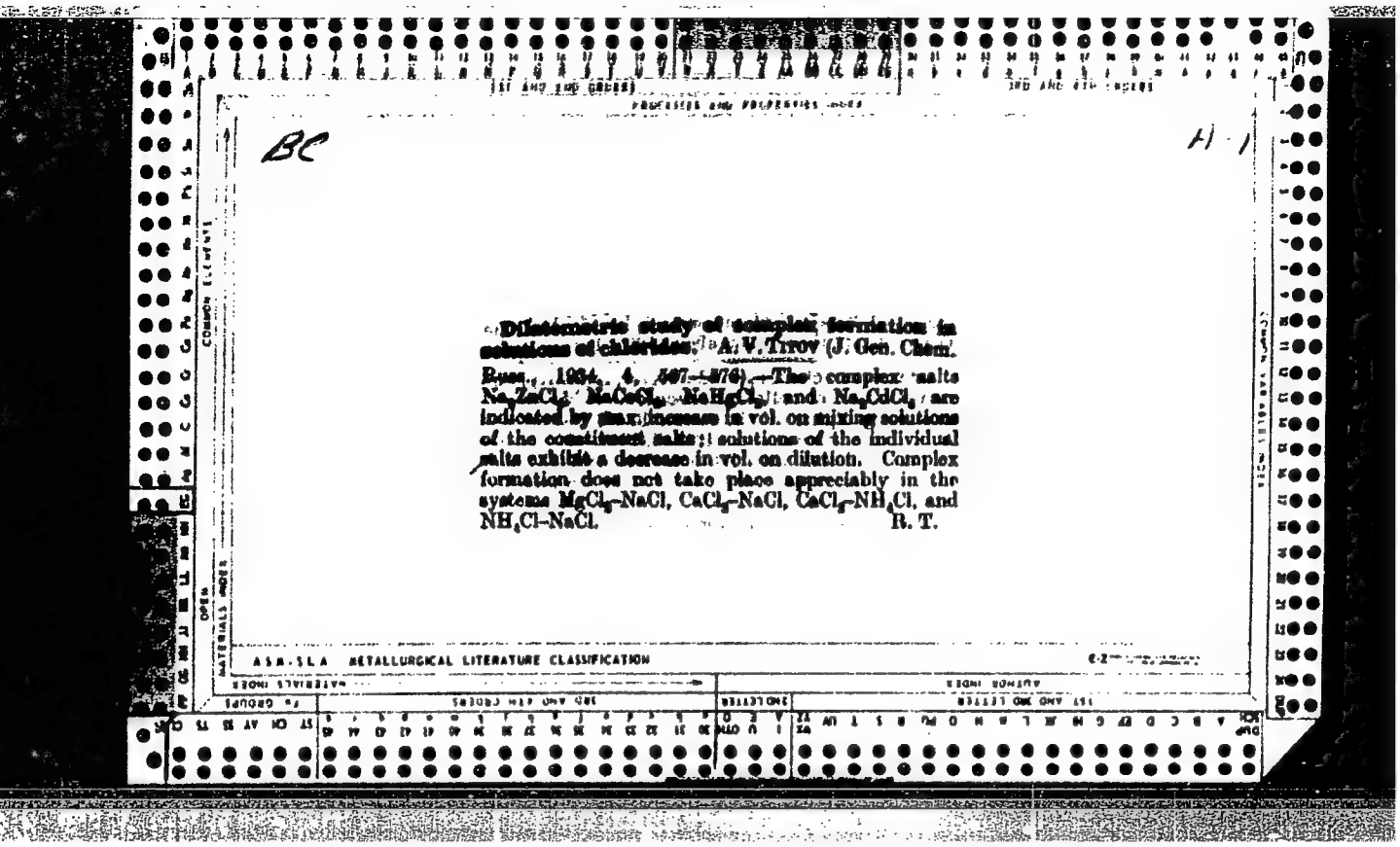
PROCESSES AND PROPERTIES INDEX

CA

2

Effect of temperature on the composition of complexes obtained by the interaction of chloride solutions. A. V. Titov. *Trans. Inst. Chem. Tech. Ivanovo* (U. S. S. R.) No. 1, 12–14(1950).—A study was made of the vol. changes of the system $ZnCl_2$–NaCl in the interval −6 to +70° and with the $ZnCl_2$ content ranging from 0 to 100%. All detns. were made with 6 *M* $ZnCl_2$ and NaCl. Increases in vol. were noted which corresponded to complex formations. The most stable complex was Na_2ZnCl_4 while the formation of $NaZnCl_3$ at 0° and below was noted.
H. Z. Kamich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

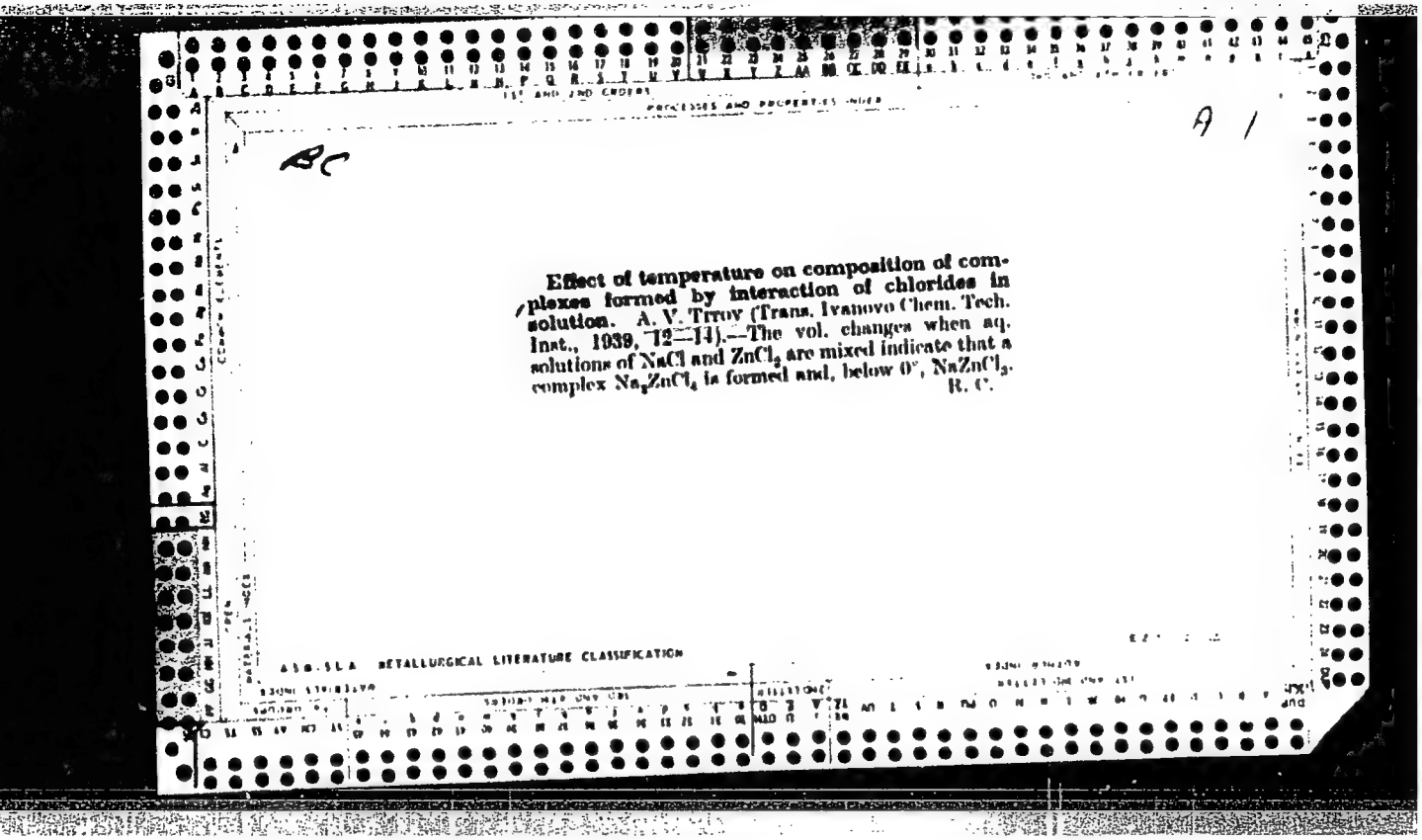


BC

H-1

Dilatometric study of complex formation in solutions of chlorides. A. V. Tirov (J. Gen. Chem. Russ., 1934, 4, 567–576).—The complex salts Na_2ZnCl_4, $NaCaCl_3$, $NaHgCl_3$, and Na_2CdCl_4 are indicated by max. increase in vol. on mixing solutions of the constituent salts; solutions of the individual salts exhibit a decrease in vol. on dilution. Complex formation does not take place appreciably in the systems $MgCl_2$–NaCl, $CaCl_2$–NaCl, $CaCl_2$–NH_4Cl, and NH_4Cl–NaCl. R. T.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

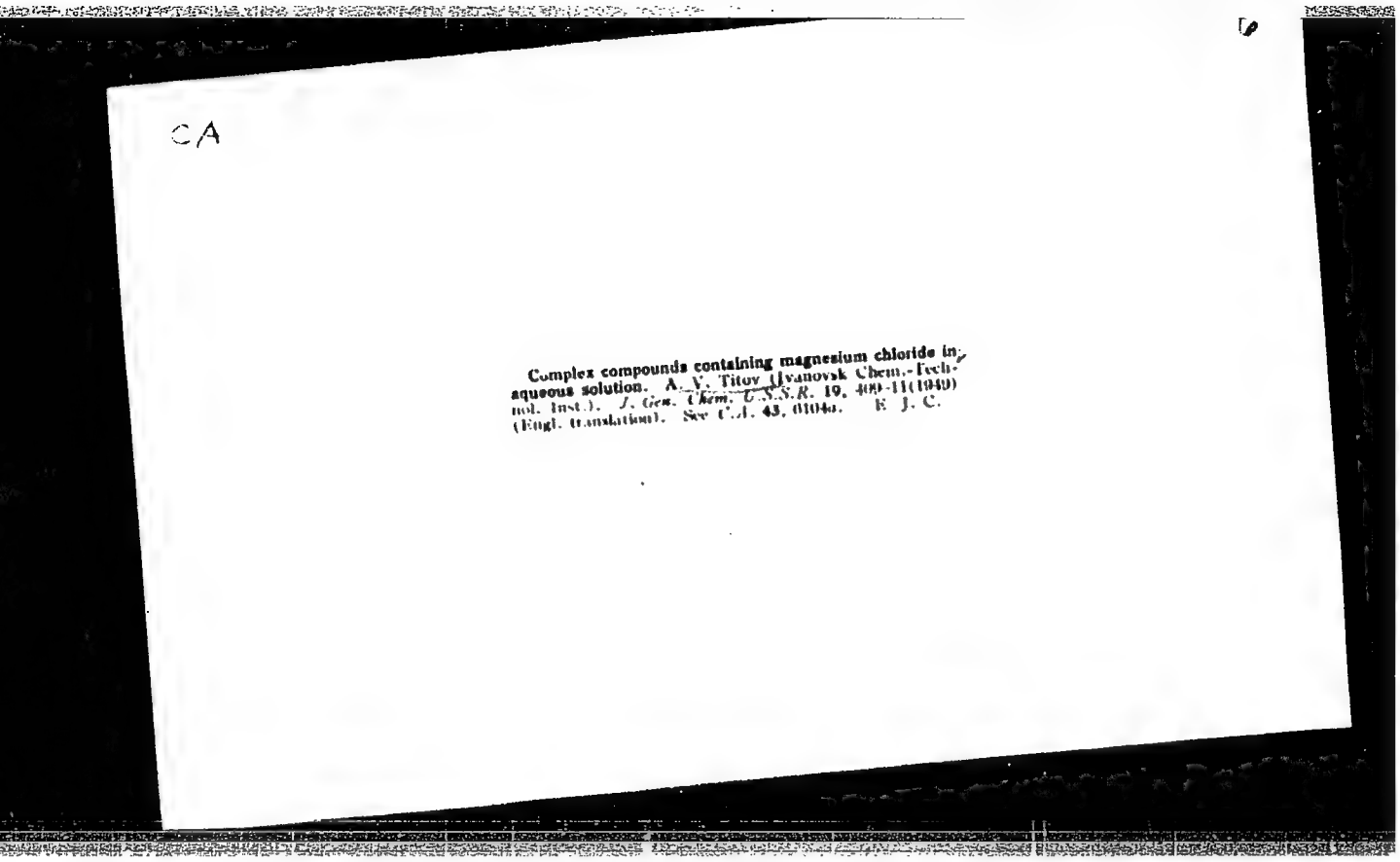


BC

A 1

Effect of temperature on composition of complexes formed by interaction of chlorides in solution. A. V. Troov (Trans. Ivanovo Chem. Tech. Inst., 1939, 12—14).—The vol. changes when aq. solutions of NaCl and $ZnCl_2$ are mixed indicate that a complex Na_2ZnCl_4 is formed and, below 0°, $NaZnCl_3$. R. C.

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION



CA

Complex compounds containing magnesium chloride in aqueous solution. A. V. Titov (Ivanovsk Chem.-Technol. Inst.). *J. Gen. Chem. U.S.S.R.* 10, 409-11(1940) (Engl. translation). See C.A. 43, 6104a. E. J. C.

Titov, A. V.

USSR/Chemistry - Analysis

Card 1/1 Pub. 151 - 14/36

Authors : Titov, A. V.

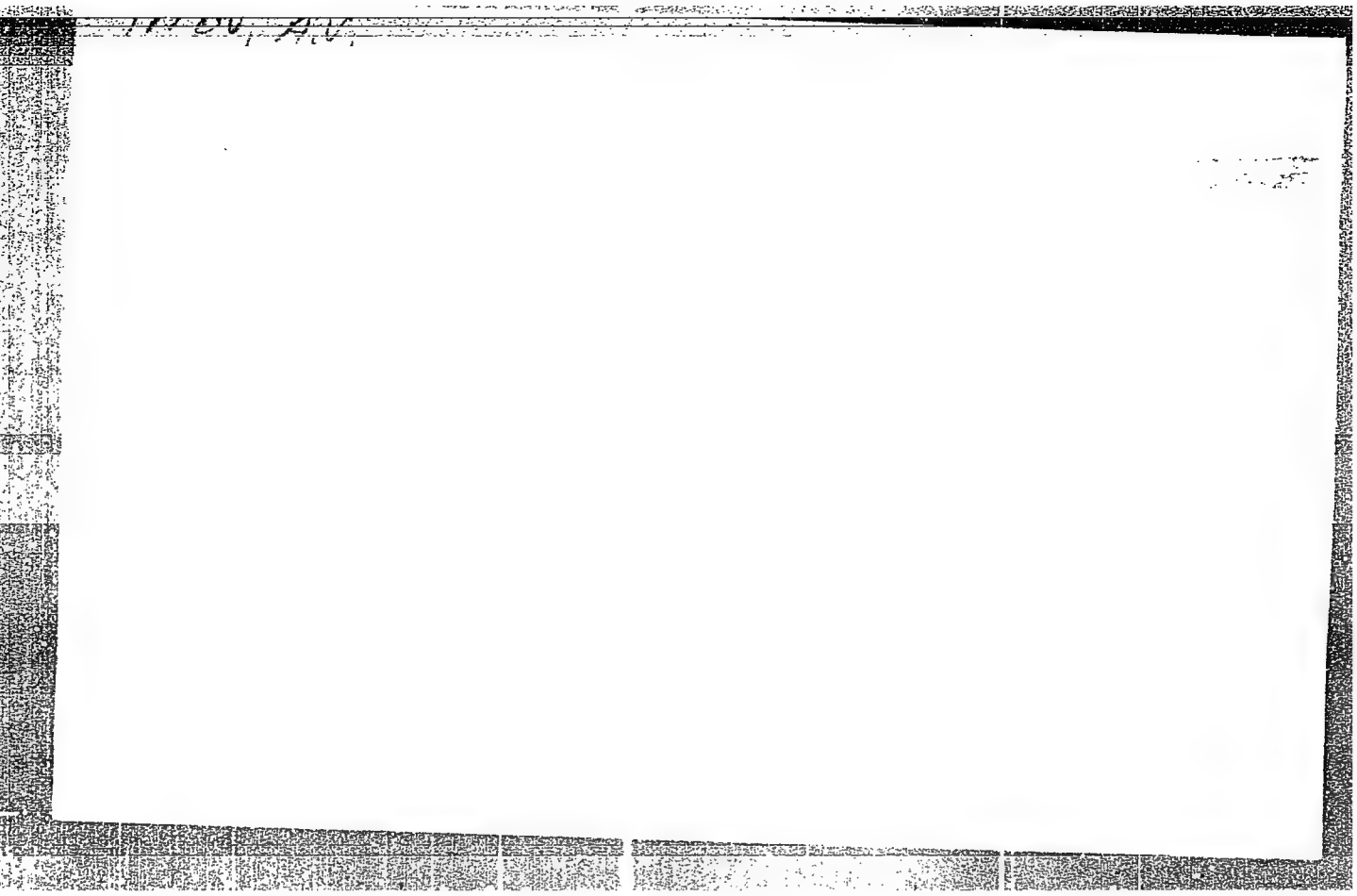
Title : Physico-chemical analysis of the nitric acid - acetic acid system

Periodical : Zhur. ob. khim. 24/1, 78-81, Jan 1954

Abstract : The specific weights of mixtures formed by the HNO_3 - $C_2H_4O_2$ system were analytically determined at 25°. The corrosion characteristics of these mixtures were investigated and the losses in weight of steel samples exposed to the effects of the mixtures for a period of 24 hrs were determined in grams per square meter of surface. The existence in the HNO_3-$C_2H_4O_2$ system of a less-stable $HNO_3 \cdot CH_3COOH$ compound was established on the basis of the observed changes in the deviations of the atomic concentrations from the roughly calculated and corroding properties of the mixture. Six references: 5-USSR and 1-German (1902-1949). Table.

Institution : The Chemical-Technological Institute, Ivanovo

Submitted : June 13, 1953



TITOV, A.V.

USSR/Corrosion - Protection From Corrosion. J.

Abs Jour : Ref Zhur - Khimiya, No 2, 1957, 6873

Author : Titov, A.V.
Inst : Ivanovo chemico-Technological Institute
Title : Concerning Corrosion of Steel in the System Nitric Acid - Acetic Acid.

Orig Pub : Tr. Ivanovsk. khim.-tekhnol. in-ta, 1956, No 5, 80-81

Abstract : Investigations of corrosion resistance of St.2 steel in HNO_3 + CH_3COOH mixtures, at 20°, have shown that maximum rate of corrosion of steel is observed in the pure acids, and a minimum rate in a mixture of acids containing 42% by volume of HNO_3. The minimum of corrosion rate of steel is attributed to the presence in the mixture of acids of a chemical compound having the composition $HNO_3 . CH_3COOH$. Study of the corrosive properties of the system HNO_3-CH_3COOH provides an additional proof of the existence in this system of the low-stability compound $HNO_3 . CH_3COOH$.

Card 1/1

137-58-2-3521

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 178 (USSR)

AUTHOR: Titov, A. V.

TITLE: On the Problem of the Corrosion of Steel in Mixtures of Sulfuric and Nitric Acids (K voprosu korrozii stali v smesyakh sernoy i azotnoy kislot)

PERIODICAL: Tr. Ivanovsk. khim.-tekhnol. in-ta, 1956, Nr 5, pp 82-84

ABSTRACT: A communication is presented on the corrosion of a steel (Nr 2 steel) of a given chemical composition in various mixtures of the acids H_2SO_4 and HNO_3. The experiments were run for six hours in a thermostatically-controlled chamber at 20°C. The corrosive effect was evaluated by the six-hourly weight loss of the specimen in mg/cm^2. A diminution in the rate of corrosion in mixtures of H_2SO_4 and HNO_3 as compared to the corrosion in the initial acids was found; this is explained by the existence in the mixtures of such chemical compounds as, for example, $N_2O_5 \cdot 4SO_3 \cdot 5H_2O$, which affect the steel to a lesser degree than do the original acids taken individually. Destruction of the compounds thus obtained and an increase in the corrosion of the steel set in when the mixture contains

Card 1/2

137-58-2-3521

On the Problem of the Corrosion (cont.)

H_2O in quantities corresponding to the following H_2O content in the initial acids: $H_2SO_4 \cdot nH_2O$ and $HNO_3 \cdot nH_2O$, where $3 > n > 2$.

R.K.

1. Steel--Corrosion--Test results 2. Sulfuric acid--Corrosive effects --Test results 3. Nitric acid--Corrosive effects--Test results

Card 2/2

L 41617-65 EWG(j)/EWT(m) GS
ACCESSION NR: AT5008048 S/0000/64/000/000/0233/0247 27
B11

AUTHOR: Rachinskiy, F. Yu.; Kushakovskiy, M. S.; Matveyev, B. V.; Potapenko, T. G.; Slavachevskaya, N. M.; Tank, L. I.; Titov, A. V.; Yampol'skaya, L. I.

TITLE: Comparative evaluation of certain models for the initial selection of radiation protection compounds 17

SOURCE: Patogenez, eksperimental'naya profilaktika i terapiya luchevykh porazheniy (Pathogenesis, experimental prevention, and therapy of radiation injuries); sbornik statey. Moscow, Izd-vo Meditsina, 1964, 233-247

TOPIC TAGS: radiation protection, radiation sickness, aliphatic compound, oxygen compound, methemoglobin

ABSTRACT: Assuming that the antioxidant and reducing properties of radiation protection compounds of bivalent sulfur are related to their ability to decrease the severity of radiation sickness, models using these properties were compared. It was established that not a single model, taken separately, was adequate for a biological method of selecting antiradiation agents; however, the results of tests of

Card 1/2

L 41617-65
ACCESSION NR: AT5008048

substances on several models can serve as an initial test for the selection of active substances. Aliphatic, oxygen, and methemoglobin models most fully reflect the potential radiation protection activity of substances. Orig. art. has: 8 tables.

ASSOCIATION: none

SUBMITTED: 19Aug64 ENCL: 00 SUB CODE: LS,OC

NO REF SOV: 002 OTHER: 023

Card 2/2

GAVRILENKO, I.V., kand.tekhn.nauk; MATSUK, Yu.P., kand.tekhn.nauk; KUZNETSOVA, N.N., inzh.; BOROVOY, L.Ye., inzh.; Prinimali uchastiye: SAUSHKINA, L.V.; IVANOVA V.F.; CHEKANOVA, S.V.; TITOV, A.V.; DEMIN, I.V.

Conditioning of oil cakes. Masl.-zhir.prom. 30 no.2:24-28 F '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Gavrilenko, Matsuk, Kuznetsova, Saushkina, Ivanova). 2. Gosudarstvennyy proyektnyy institut "Giprozhir" (for Borovoy, Titov, Demin).

SMOLKIN, G.Ye.; TITOV, A.V.

Bicylindrical objective for time-base scanning of the spectrum by means of an electron-optical light amplifier. Prib. i tekh. eksp. 8 no.2: 129-133 Mr-Ap '63. (MIRA 16:4)

1. Institut atomnoy energii AN SSSR.
(Electron optics) (Spectrograph)

TITOV, Aleksandr Vasil'yevich; ZANADVOROV, S.M., red.; KOFANOV, P.F., tekhn. red.

[Housing construction and local natural climatic conditions] Zhilishchnoe stroitel'stvo i mestnye prirodno-klimaticheskie usloviia; voprosy proektirovaniia i stroitel'stva zhilishch na Severnom Kavkaze. Krasnodar, Krasnodarskoe knizhnoe izd-vo, 1961. 134 p. (MIRA 16:3)
(Caucasus, Northern--Dwellings--Design and construction)

TITOV, A.V., inzhener.

Mechanization of loading and unloading operations in cottonseed warehouses. Masl.-zhir.prom. 19 no.7:3-6 '54. (MLRA 8:1)

1. Giprozhir.
(Loading and unloading) (Cottonseed)

TITOV, Aleksey Vladimirovich; KHMEL'NITSKAYA, A.Z., red.; SATAROVA, A.M., tekhn. red.

[Overall mechanization in oil extraction plants]Kompleksnaia mekhanizatsiia na maslodobyvaiushchikh zavodakh. Moskva, Pishchepromizdat, 1962. 175 p. (MIRA 15:10)
(Oil industries—Equipment and supplies)

DORMIDONTOV, K.N.; TITOV, A.Z.

[Railroad transport and management in the peat industry] Tiagovoe khoziaistvo zheleznykh dorog torfianoi promyshlennosti. Moskva, Gos. energ. izd-vo, 1953. 223 p. (MLRA 7:3)
(Railroads) (Peat industry)

TITOV, A.V., zasluzhennyy uchitel' shkoly RSFSR.

My experience in teaching biology. Est. v shkole no.3:73-75 My-Je '53.
(MLRA 6:5)

1. Srednyaya shkola no. 16, goroda Vladivostoka, poselok Sedanka.
(Biology)

TITOV, A.V.

Effect of a signal of muscular activity on certain aspects of metabolism in a muscle at rest. Vest.Len.un. 10 no.4:53-62 Ap '55. (MLRA 8:8)

(Metabolism) (Muscles)

TITOV, B. A.

~~BELOUSOV, M.~~

BUKHGALTERSKIY UCHET I KAL'KULYATSIYA V PROMYSHLENNOSTI PRODOVOL'STVENNYKH TOVAROV [COST ACCOUNTING AND BOOKKEEPING IN FOODSTUFF INDUSTRIES, BY] M. S. BELOUSOV [AND] B. A. TITOV. MOSKVA, PISHCHEPROMIZDAT, 1957

323 p. TABLES.

TITOV, Boris Andreyevich; RYZHKOV, A.S., red.; GERASIMOVA, Ye.S., tekhn. red.

[Analysis of the financial operation of an industrial enterprise] Analiz finansovoi deiatel'nosti promyshlennogo predpriiatiia. Moskva, Ekonomizdat, 1963. 82 p. (MIRA 16:11)

(Finance)

L [illegible]
ACCESSION NR: AP5013920

AUTHOR: Kozlov, V. N.; Romanov, A. A.; Titov, B. P.

TITLE: An absorption trap for diffusion and mechanical pumps. Class 27. No. 171499

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 58

TOPIC TAGS: pump, absorption trap, sorption, zeolite

ABSTRACT: This Author's Certificate introduces an absorption trap for diffusion and mechanical pumps. The device contains absorption elements and an electric heater which is [illegible] during sorbent regeneration.

ASSOCIATION: Kharkovskiy fiziko-tekhnicheskiy institut [illegible]

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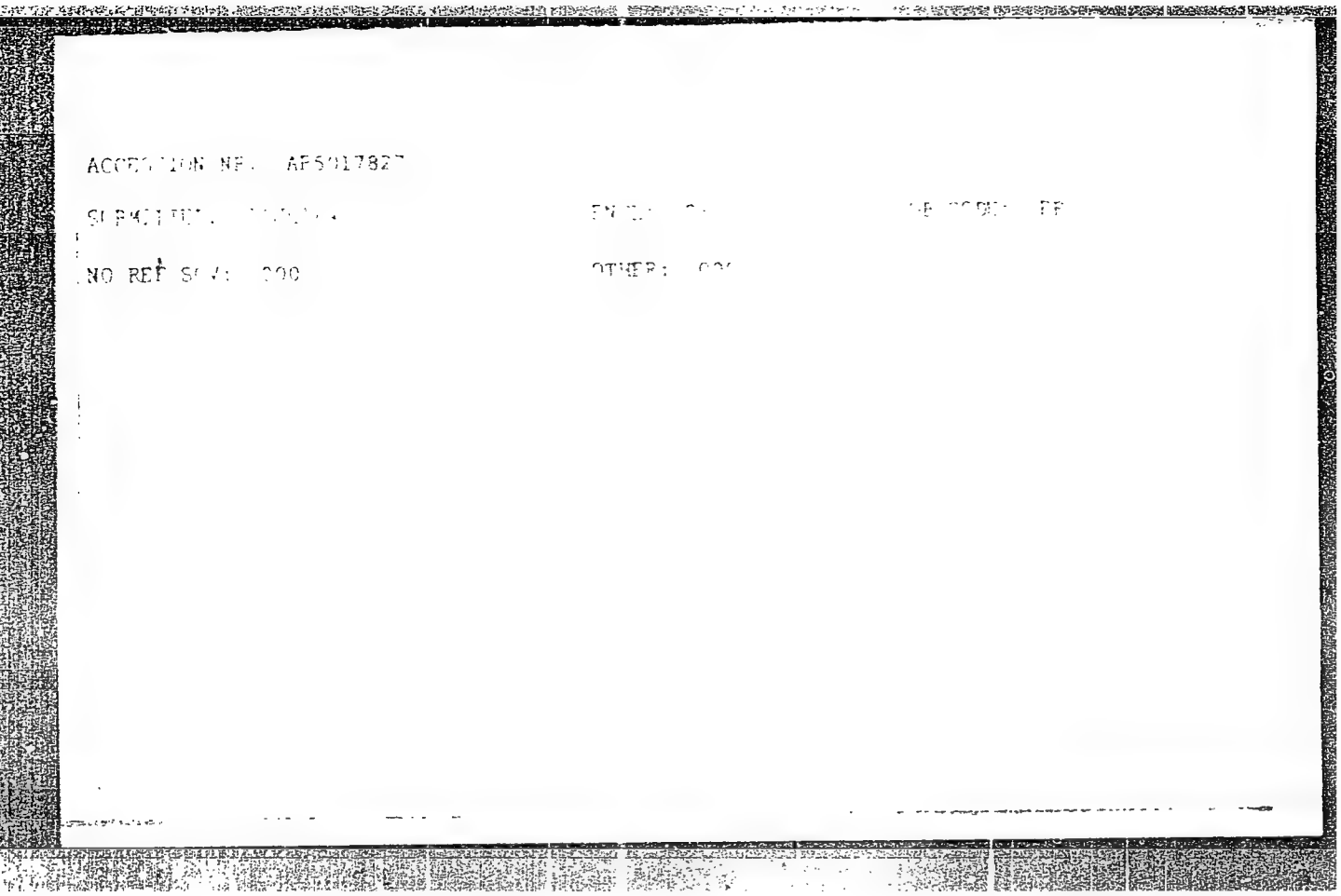

ACCESSION NR: AP5017827

ENCLOSURE: 01

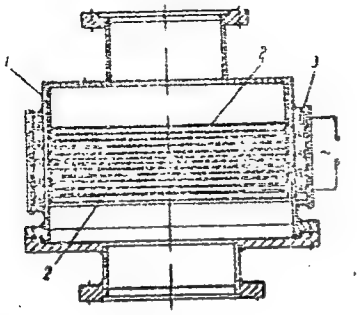

Fig. 1--housing; 2--absorption element; 3--electric heater

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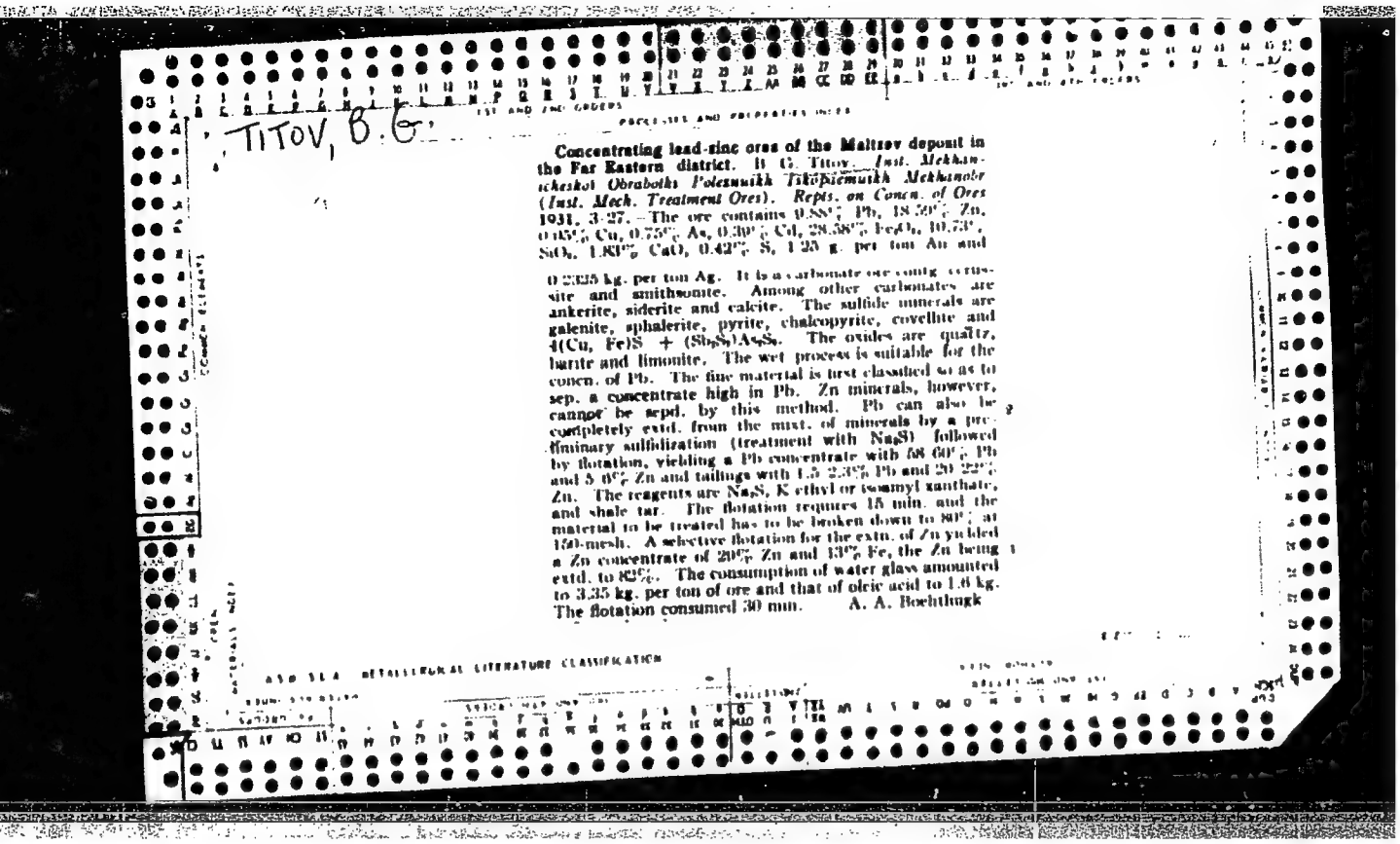
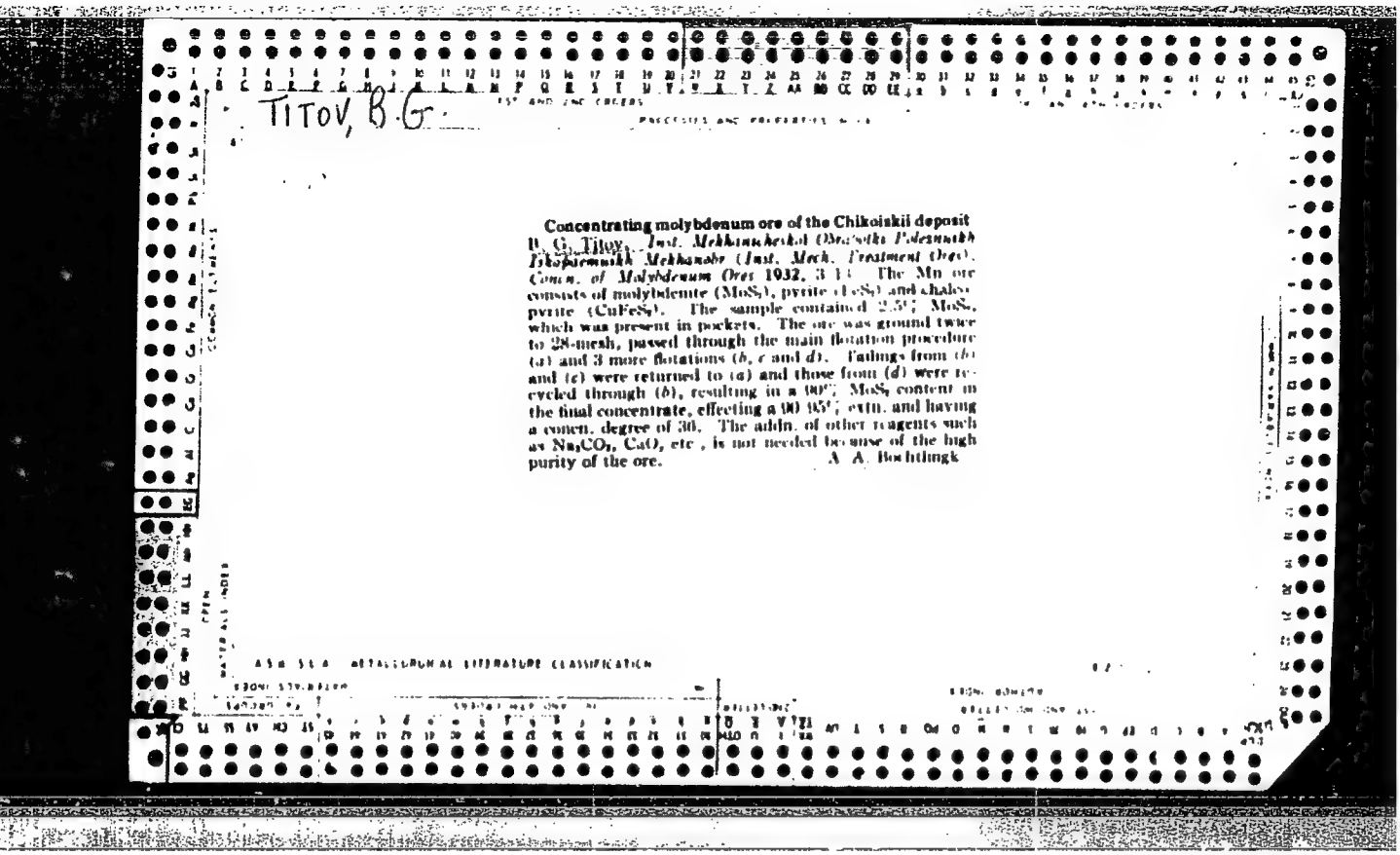


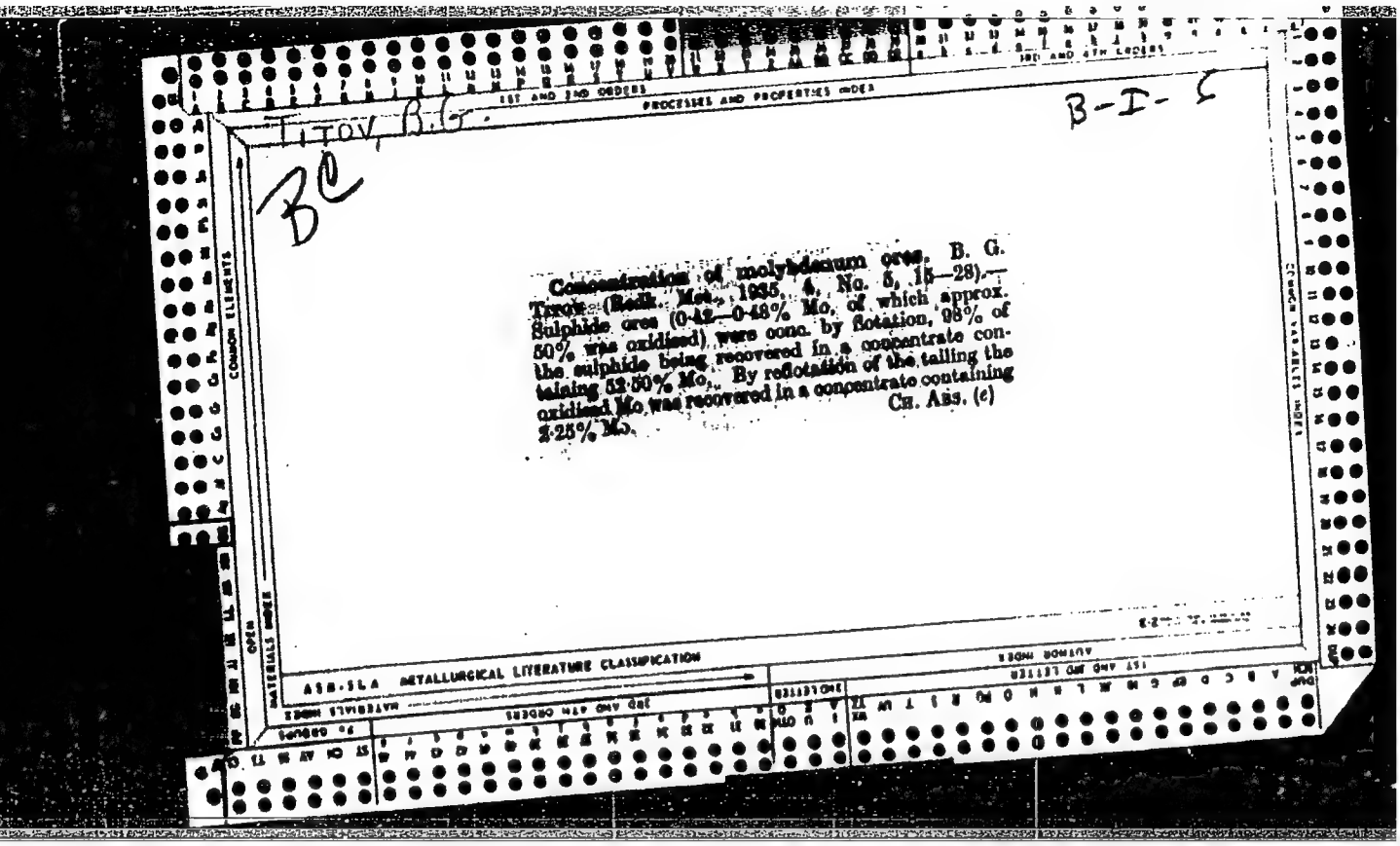
TITOV, B. G.

Concentrating lead-zinc ores of the Maltsev deposit in the Far Eastern district. B. G. Titov. *Inst. Mekhanicheskoi Obrabotki Poleznukh Iskopaemukh Mekhanobr* (*Inst. Mech. Treatment Ores*). *Repts. on Concn. of Ores* 1931, 3-27.—The ore contains 0.88% Pb, 18.50% Zn, 0.05% Cu, 0.75% As, 0.30% Cd, 28.58% Fe_2O_3, 10.73% SiO_2, 1.81% CaO, 0.42% S, 1.25 g. per ton Au and 0.2335 kg. per ton Ag. It is a carbonate ore contg. vein-quartz, barite and limonite. The wet process is suitable for the concn. of Pb. The fine material is first classified so as to sep. a concentrate high in Pb. Zn minerals, however, cannot be sepd. by this method. Pb can also be completely extd. from the mixt. of minerals by a preliminary sulfidization (treatment with Na_2S) followed by flotation, yielding a Pb concentrate with 58.60% Pb and 5.0% Zn and tailings with 1.5-2.5% Pb and 20-22% Zn. The reagents are Na_2S, K ethyl or isoamyl xanthate, and shale tar. The flotation requires 15 min. and the material to be treated has to be broken down to 80% at 150-mesh. A selective flotation for the extn. of Zn yielded a Zn concentrate of 20% Zn and 13% Fe, the Zn being extd. to 82%. The consumption of water glass amounted to 3.35 kg. per ton of ore and that of oleic acid to 1.6 kg. The flotation consumed 30 min. A. A. Boehtlingk



TITOV, B.G.

Concentrating molybdenum ore of the Chikoiskii deposit
B. G. Titov. *Inst. Mekhanicheskoi Obrabotki Poleznykh Iskopaemykh Mekhanobr (Inst. Mech. Treatment Ores). Comm. of Molybdenum Ores* 1932, 3 11. The Mn ore consists of molybdenite (MoS_2), pyrite (FeS_2) and chalcopyrite ($CuFeS_2$). The sample contained 2.5% MoS_2, which was present in pockets. The ore was ground twice to 28-mesh, passed through the main flotation procedure (*a*) and 3 more flotations (*b*, *c* and *d*). Tailings from (*b*) and (*c*) were returned to (*a*) and those from (*d*) were recycled through (*b*), resulting in a 90% MoS_2 content in the final concentrate, effecting a 90–95% extn. and having a concn. degree of 30. The addn. of other reagents such as Na_2CO_3, CaO, etc., is not needed because of the high purity of the ore. A. A. Boichtingk



TITOV, B.G.

BC

B-I-5

Concentration of molybdenum ores. B. G. Titov. (Bull. Met., 1935, 4, No. 5, 15—28).—Sulphide ores (0·42—0·48% Mo, of which approx. 50% was oxidised) were conc. by flotation, 98% of the sulphide being recovered in a concentrate containing 52·50% Mo. By reflotation of the tailing the oxidised Mo was recovered in a concentrate containing 2·25% Mo. Ch. Abs. (c)

TITOV, B.G.

S/796/62/000/003/016/019

AUTHORS: Baranov, V.F., Dmitriyevskiy, I.M., Titov, B.G.

TITLE: Alignment and calibration of a longitudinal magnetic β-spectrometer.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Pribory i metody analiza izlucheniy. no.3. 1962, 156-163.

TEXT: A magnetic nonferrous lens-type β-spectrometer (SM) was constructed for certain spectroscopic tasks, e.g., for the identification of radioactive isotopes. A general-view photo and a cross-section are shown. The device was designed for minimum energy consumption consistent with acceptable electronic-optical characteristics. The SM vacuum chamber (VC) was fashioned from a 120-mm ID seamless Cu pipe and was lined with Al. At the center of the axis a Pb block protects the detector from the γ-rays of the source. Source and detector are placed symmetrically relative to the central plane of the lens, 1,000 mm apart. Vacuum: 10^{-6} mm Hg. A pressure-lock arrangement permits exchange of sources with very little vacuum loss. The external lens diam is 520 mm, the internal diam is 200 mm, thickness 250 mm. The lens consists of 5 identical sections, each comprising 825 coils of Cu bus of 4.01 mm^2 cross-section, insulated by fiberglass. The sections are water-cooled. The in-series resistance of the 5 sections is 16 ohm. Total power rejection with water cooling: 5 kw. A 150-amp.hr battery feeds the magnetic

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Alignment and calibration...

lens (ML) of the SM. The lens focuses 3-mev electrons with an 8.5-a current. The ML is fixed; alignment consists in changing the position and inclination of the VC relative to the ML. Alignment is highly critical and affects primarily the resolution of a SM. The literature on alignment is scant, and a method was developed independently. Preliminary alignment was performed by measurement of the longitudinal component of the magnetic-field strength in two planes perpendicular to the geometric lens axis. The second step brings the geometric axis of the VC and of the diaphragms bounding the electron beam into coincidence with the magnetic axis of the lens. The accuracy of the preliminary alignment is verified by photographing the beam of conversion electrons of the K-line of Cs^{137}. Concentricity of the central spot (electrons of the continuous β-spectrum) with the geometric axis of the VC and the diaphragm system, and concentric circularity of the monochromatic-electron beam are the alignment criteria. The remaining ellipticity of the beam is produced by a misalignment which results in an additive broadening of the spectral line (calculation per Pratt, W., et al., Rev.Sci.Instrum.,v.22,no.2,1951, 92). The resolution was improved by the introduction of an annular diaphragm in the region of the annular focus. The experimental method for the identification of the location of the annular focus is described. The dependence of the resolution and transmission of the spectrometer on the diameter of the counter window, the aperture of the electron beam, and the width of the slit in the annular diaphragm was also

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investigated. The calibration of the β-spectrometer was performed at the maxima of the K- and L-lines of the Cs^{137} conversion electrons. At the maximum of the K-line (H_ρ=3381 œ·cm) the current through the lens I=2.491± 0.002 a. Since the $H_\rho = f(I)$ in nonferrous spectrometers is a straight line, the electrons recorded at I ≥ 1 a have an impulse H_ρ = 1359± 2 œ·cm. The calibration was verified by reading the β spectrum of P^{32} and the spectrum of the photoelectrons knocked out from a Bi converter (3 mg/cm^2) by Hf^{181} γ-rays. A calibration curve was drawn through the test points, viz., a straight line with a slope of 1359± 3 œ·cm/a. There are 7 figures and 5 references (1 Russian-language Soviet and 4 English-language, of which one is cited in Russian translation).

ASSOCIATION: None given.

Card 3/3

TITOV, B.M., dotsent; VORONCHIKHIN, V.M., inzh.; TIMOFEYEV, V.A., inzh.; UDUT, V.S., inzh.

Results of investigating the main fans in Kuznetsk Basin mines. Izv. vys. ucheb. zav.; gor. zhur. no.10:165-168 '60.(MIRA 13:11)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M.Kirova. Rekomendovana kafedroy gornoy mekhaniki Tomskogo politekhnicheskogo instituta.
(Kuznetsk Basin--Mine ventilation)
(Fans, Electric)

TITOV, B.M., dotsent

Determining according to consolidated indices the prices of a series of similar size fans having built-in motors with different power ratings. Izv. vys. ucheb. zav.; gor. zhur. 7 no.11: 51-58 '64. (MIRA 18:3)

1. Tomskiy politekhnicheskiy institut imeni Kirova. Rekomendovana kafedroy gornoy elektromekhaniki, gornykh mashin i rudnichnogo transporta.

TITOV, B.M. dotsent; PETROV, N.N., inzh.

Device for the automatic and [illegible] of axial fans by turning of the rotor blad[illegible]. Izv. vys. uchob. zav.; gor. zhur. 7 no.10:1[illegible]45 '64.

1. Tomskiy politekhnicheskiy [illegible]. Rekomendovana nauchnym seminarom kafedr [illegible] mashin i rudnichnogo transporta.

TITOV, B.M., dotsent

Designing the automatic system of controlling the performance of the 2BG and 55V compressors. Izv.vys.ucheb.zav.:gor.zhur. 7 no. 1:150-153 '64. (MIRA 17:5)

1. Tomskiy Ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M.Kirova. Rekomendovana kafedroy gornoy mekhaniki

TITOV, B.M., dotsent; VORONCHIKHIN, V.M., inzh.; TIMOFEYEV, V.A., inzh.; UDUT, V.S., inzh.

Some characteristic defects of compressor plants in Kuznetsk Basin mines. Izv.vys.ucheb.zav.; gor.zhur. 6 no. 12:132-140 '63. (MIRA 17:5)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M.Kirova.

AUTHOR: B.M. Titov, Candidate of Technical Sciences 127-58-4-14/31

TITLE: Adjustment of the Operation of Ventilators With Pneumatic Gears (Regulirovaniye rezhima raboty ventilyatorov s pnevmaticheskim privodom)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 4, pp 53-56 (USSR)

ABSTRACT: Most foreign and all home-built ventilators are not provided with a gadget to adjust their operation to the amount of current necessary, though the cost of this gadget would soon pay for itself by savings in electric power. At present, the work of ventilators with pneumatic gears can be regulated either by a gradual change of the number of revolutions of its axle or by the installation on long supply-line of one-stage ventilators connected consecutively. All modern pneumatic ventilators have a turbine gear. The capacity of the motor can be regulated either by changing the air pressure in the jet chamber by connecting a various number of nozzles, or by decreasing the pressure in this chamber by throttling. By analytic and graphic determination the author shows that the jet method is far more economical than the throttle method. There are 3 graphs, 1 table and 2 Soviet references.

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127-58-4-14/31

Adjustment of the Operation of Ventilators With Pneumatic Gears

ASSOCIATION: Tomskiy politekhnicheskiy institut (The Tomsk Polytechnical Institute)

Card 2/2 1. Pneumatic ventilators - Design 2. Pneumatic ventilators - Control

TITOV, B. M.

Titov, B. M.

"Increasing the Efficiency of Mine-Ventilating Equipment Using Compressed Air." Min Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov. Tomsk, 1955 (Dissertation for the degree of Candidate in Technical Sciences)

SO: Knizhnaya letopis' No. 27, 2 July 1955

TITOV, B.M., gornyy inzhener

Ways of reducing the cost of mine ventilation. Ugol' 30 no.4: 8-10 Ap '55. (MLRA 8:6)

1. Tomskiy politekhnicheskiy institut im. S.M.Kirova.
(Mine ventilation)

TITOV, B.M., dots.; AYZENSHTEYN, A.R.

Fans in series for booster ventilation. Izv.vys.ucheb.zav.; gor.zhur. no.4:114-119 '58. (MIRA 11:11)

1. Tomskiy politekhnicheskiy institut.
(Mine ventilation) (Fans, Mechanical)

TITOV, B.M., kand.tekhn.nauk

Regulating the operating conditions of pneumatically driven fans. Gor. zhur. no.4:53-56 Ap '58. (MIRA 11:4)

1. Tomskiy politekhnicheskiy institut.
(Fans, Mechanical--Pneumatic driving)
(Governors (Machinery))

TITOV, B.M., dots., kand.tekhn.nauk.

Determining the optimum capacity of ventilation ducts. Nauch. dokl. vys. shkoly; gor. delo no.3:128-134 '58. (MIRA 11:9)

1.Predstavlena kafedroy gornoy mekhaniki Tomskogo politekhnicheskogo instituta imeni S.M. Kirova.
(Mine ventilation)

TITOV, B.N.; VORONCHIKHIN, V.N.

Centrifugal water trap. Gor.zhur. no.9:74 S '57. (MIRA 10:9)

1. Tomskiy politekhnicheskiy institut imeni S.M.Kirova.
(Air compressors)

TITOV, D.

Predupredit' poiavlenie chasotki ovets sposobstvovat' uvelicheniiu proizvodstva shersti v oblasti (Preventing mange in sheep means furthering the wool production in the oblast') (From experience of farms of an oblast'). Ust'-Kamenogorsk, 1959, 8 pages. East-Kazakhstan Oblast' Administration of Agriculture. Free, 500 copies.

ACC NR: AR6018976 SOURCE CODE: UR/0271/66/000/002/B051/B051

AUTHOR: Lisitsyn, G. F.; Ovchinnikov, V. M.; Titov, D. G.

TITLE: A group of ferrite core-transistor units with a clock frequency of 100 KHz

SOURCE: Ref. zh. Avtomat telemekh i vychisl tekhn, Abs. 2B364

REF SOURCE: Tr. Mosk. energ. in-ta, vyp. 60, 1965, 139-153

TOPIC TAGS: magnetic core, pulse generator, electromagnetic memory

TRANSLATION: A ferrite core-transistor component group is designed using VT ferrite cores 1, 2 × 1.4 × 0.8 mm and P14A transistors. A table of 6 unit types is included. The component group load is in the collector circuit and may be varied between 1 and 4 component groups. The write pulse generators are available either in transistorized or in vacuum tube versions. The operational temperature range is 40-70°C. The winding data for four types of accumulators is given. The various systems based on component groups are extensively described: a memory cell, an inhibit unit, a gate-coincidence unit with two inputs, an eight input summing unit, and shift pulse generators. 10 figures, 2 references. N. S.

SUB CODE: 09

UDC: 681.142.67:621.382

Card 1/1

SHAMAYEV, Yu.M., dotsent, kand.tekhn.nauk; LISITSYN, G.F., kand.tekhn. nauk; MEL'NIKOV, E.A., inzh.; OVCHINNIKOV, V.M., inzh. SKUCHAREV, V.V., kand.tekhn.nauk; TITOV, D.G., inzh.

Developing and testing the method of automatic object adjustment of the width of the line on the screen for electron-beam tubes. Trudy MEI no.27:267-280 '58. (MIRA 13:4)
(Cathode ray tubes)

TITOV, D.I.

Annotations of research carried out by the Technological Institute of Design and Construction for the Dnieper Economic Region. Met. i gornorud. prom. no.4:59-60 Jl-Ag '63. (MIRA 16:11)

1. Glavnyy inzh. Proyektno-konstruktorskogo tekhnologicheskogo instituta.

VOLODARSKIY, Z.B.; KUZNETSOV, V.A.; TITOV, D.I.; SALOV, A.Ye.; DRO, S.M.; DEMCHENKO, K.I.

Console and belt-type waste stacker. Biul.TSIICHM no.9:51 '60. (MIRA 15:4)
(Materials handling—Patent)